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DISCUSSION PAPER

# Measurement Bases for Financial Accounting – Measurement on Initial Recognition

**Prepared by staff of the Canadian Accounting Standards Board**

Comments to be submitted by 19 May 2006

International Accounting Standards Board®

Discussion Paper

# Measurement Bases for Financial Accounting

## Measurement on Initial Recognition

Prepared by staff of the Canadian Accounting Standards Board

**Acknowledgements**

We acknowledge the advice and input received from individual members of the AcSB, IASB and their staffs, as well as representatives of other national accounting standard-setters.

This Discussion Paper *Measurement Bases for Financial Reporting — Measurement on Initial Recognition* is published by the International Accounting Standards Board (IASB) for comment only. The Discussion Paper was prepared by staff of the Canadian Accounting Standards Board (AcSB) and sets out the views of the authors. It has not been deliberated by the IASB or the AcSB and does not necessarily reflect the views of the IASB or the AcSB.

The IASB is publishing this Discussion Paper to contribute to the debate on measurement bases and to seek views on the topic from interested parties.

Comments on the Discussion Paper should be submitted in writing so as to be received by **19 May 2006**.

All responses will be put on the public record unless the respondent requests confidentiality. However, such requests will not normally be granted unless supported by good reason, such as commercial confidence. If commentators respond by fax or email, it would be helpful if they could also send a hard copy of their response by post. Comments should preferably be sent by email to: **ed.accounting@cica.ca** or addressed to:

**Director, Accounting Standards**
**Canadian Accounting Standards Board**
**277 Wellington Street West, Toronto, Ontario M5V 3H2 Canada**
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Comments received will be analysed by staff of the AcSB. The analysis and copies of responses will be provided to the IASB so that they may be taken into account when the IASB proceeds to debate the issues and form its preliminary views.




**Enquiries about this publication or the condensed version should be addressed to: IASCF Publications Department, 1st Floor, 30 Cannon Street, London EC4M 6XH, United Kingdom. Tel: +44 (0)20 7332 2730 Fax: +44 (0)20 7332 2749 Email: publications@iasb.org Web: www.iasb.org**

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# INTRODUCTION

This Discussion Paper focuses on measurement on initial recognition of assets and liabilities. It represents the first stage of a project to address the measurement objective for assets and liabilities that are recognized in financial statements. The project is intended to provide the International Accounting Standards Board (IASB) and national standard setters with a sound conceptual basis for:

(a) revising and expanding the measurement aspects of their conceptual frameworks, and

(b) improving the measurement requirements of their financial reporting standards.

In regard to (a), the IASB and the Financial Accounting Standards Board (FASB) in the United States have initiated a joint project to converge and improve their conceptual frameworks, including the measurement aspects. For the IASB, the discussion paper represents the first step of its due process for the measurement aspects within the broader conceptual framework project.

This project has been undertaken by staff of the Canadian Accounting Standards Board (AcSB) on behalf of the IASB and national standard setters. The views in the Discussion Paper are those of the AcSB staff. Because neither the IASB nor the AcSB has yet deliberated the issues, they have not yet formed a view on them. The IASB is publishing the Discussion Paper for comment to stimulate debate on measurement objectives and to obtain feedback that will assist it in developing its views on the issues. The Invitation to Comment commences on page 14.

Although the IASB has not yet deliberated the issues in the Discussion Paper, it has made tentative decisions in another project that addresses measurement on initial recognition of assets and liabilities. In its joint project with the FASB on *Business Combinations (Phase II) — Purchase Method Procedures*, the IASB has decided to expose for comment the "fair value hierarchy" in the FASB's exposure draft *Fair Value Measurements* (June 2004). The fair value hierarchy and related guidance will be the Boards' guidance on measuring the fair value of an acquiree's assets and liabilities in accounting for a business combination. It is intended to ensure consistent application of the fair value measurement objective in accounting for business combinations. The Discussion Paper proposes a measurement hierarchy for assets and liabilities on initial recognition that differs in some respects from the fair value hierarchy in the FASB exposure draft. The IASB would welcome comments on this issue (see Question 18 in the Invitation to Comment).

## Condensed Version of Paper

A condensed version of the paper is also available that attempts to distill the major points in this paper. Those seeking a fuller understanding of the issues and basis for the proposals should study this main Discussion Paper.

## Acknowledgements

The advice and input received from individual members of the AcSB and the IASB and their staff, as well as representatives of other national accounting standard-setters, is acknowledged.

 

# SUMMARY

# PART I: THE PROJECT AS A WHOLE

## Purpose and Importance of Project

The purpose of this project is to undertake a preliminary investigation of financial accounting measurement objectives and alternative measurement bases for assets and liabilities that are recognized in financial statements in light of developments that have taken place in theory and practice over the years.

The project has been undertaken because existing measurement standards and practices are inconsistent, and a number of major measurement issues remain unsettled. Some existing standards reflect more or less arbitrary mixed measurement compromises, pending resolution of conflicting views on appropriate measurement bases. The coverage of the measurement component of existing conceptual frameworks is very limited and out of date. Major developments have taken place since these frameworks were put in place that have significant implications for accounting measurement. These include developments in finance theory and capital markets, the application of present value and statistical probability principles, fair value measurement practices, and computer and information technology.

## Stages of the Project

The project will proceed in stages. The first stage involves analyzing possible bases for measurement on initial recognition of assets and liabilities. This stage is the focus of this paper. Measurement on initial recognition is important in its own right, and the paper's analyses and proposed principles for measurement on initial recognition lay the foundation for subsequent stages.

Subsequent stages will involve analyses of possible bases for re-measurement of existing assets and liabilities when accounting standards require re-measurement (including measurement of assets that are identified as impaired).

## Criteria for Evaluation

The criteria for evaluating alternative measurement bases are derived from the existing conceptual frameworks of the IASB and national standard setters. These criteria are based on the frameworks' decision usefulness objectives, qualitative characteristics of useful financial information (in particular, relevance and reliability), and the concepts of assets and liabilities (and their cash-equivalent flows attributes). These criteria are interpreted and applied in light of the developments in theory and practice referred to above.

# PART II: MEASUREMENT ON INITIAL RECOGNITION

## Possible Bases of Measurement on Initial Recognition

Although there has been much debate and disagreement on the merits of different measurement bases, there seems to be general agreement on what the broad alternatives are. This paper proposes that, for the purposes of measurement on initial recognition, they are the following:

- Historical cost
- Current cost - Reproduction cost and replacement cost
- Net realizable value
- Value in use
- Fair value
- Deprival value

Present value does not appear on this list because it is not a measurement basis. Rather, it is a measurement technique that can be applied to make estimates under several of the above measurement bases. The present value measurement technique is important because it provides the mathematical structure for valuing expected future cash flows, taking into account the time value of money and attendant risks. It is important to assess how different measurement bases may be reasoned to incorporate present value concepts.

Working definitions, using existing IASB terminology as a starting reference point, have been proposed for each of these measurement bases. A primary objective of this paper is to provide an informed basis for improving and conforming the essential terms and definitions of the IASB and national standard setters.

## Conceptual Analysis — Relevance

This paper proposes that differences between bases for measuring assets and liabilities on initial recognition arise from two fundamental sources:

(a) Market versus entity-specific measurement objectives; and

(b) Differences in defining the properties that affect the values of assets and liabilities.

### *Market versus Entity-Specific Measurement Objectives*

The market value measurement objective is to measure an asset or liability at the price it would be exchanged for under competitive market conditions, reflecting the market's expectations as to the amounts, timing and uncertainty of future cash flows discounted at market rates of return for commensurate risk. The paper analyzes the essential properties of market value, and addresses its relationship to fair value.

An entity-specific measurement objective looks to the expectations of the reporting entity, which may differ significantly from those implicit in a market price. Any measure of an asset or liability that differs from its market value must be based, explicitly or implicitly, on entity-specific expectations that differ from those of the market.

 

The paper concludes that, for external financial reporting purposes, the market value measurement objective has important qualities that make it more relevant than entity-specific measurement objectives on the initial recognition of assets and liabilities. Primary among these qualities is that competitive market forces serve to resolve diverse entity-specific expectations to a single price for an asset or liability that impartially reflects all publicly available information on the measurement date. This proposed conclusion presumes the existence of a market for an asset or liability on initial recognition, or failing the existence of an observable market, the ability to reliably estimate what the market price would be if a market did exist. It is proposed that the objective of the fair value measurement basis is to represent the properties of market value.

The proposed conclusion is not intended to deny that there may be significant information value to investors and other external users of financial statements in knowing the intentions, expectations, and assumptions of the management of an entity when they differ from those implicit in market value on initial recognition. However, it is proposed that such entity-specific information is more appropriately the subject of separate forecasts or supplementary disclosures.

### *Value-Affecting Properties and Market Sources*

The a priori expectation reasoned from the market value measurement objective is that there can be only one market (fair) value for an asset or liability on any measurement date. It is proposed that apparent differences between apparent market values of seemingly identical assets and liabilities on a measurement date, for example between an exit value (the amount for which an asset could be realized or a liability could be settled) and an entry value (the amount for which an asset could be bought or a liability could be incurred), may be attributable to one or both of the following sources:

(a) Differences between the assets and liabilities traded in different markets. Different entry and exit prices for an asset or liability may be attributable to, sometimes subtle, differences between the asset or liability that is traded in an "entry" market and the asset or liability that is traded in an "exit" market.

(b) Entity-specific charges or credits. Some differences between exit and entry values of assets and liabilities are attributable to entity-specific charges or credits. Under the market value measurement objective, these would be treated as expenses or income (or perhaps in some cases as direct charges or credits to equity) on initial recognition. Under an entity-specific objective, they might qualify for inclusion in the measurement of the asset or liability depending on management's expectations, intentions, and assumptions (which reflect the entity's perception of its opportunities and constraints). Transaction costs, as defined in this paper, are a common example.

However, it may be doubted that these two sources explain all differences. Evidence indicates that multiple markets with different prices do exist for some assets and liabilities after adjusting for value-affecting differences and entity-specific effects. The application of the market value measurement objective requires an understanding of the nature and causes of these differences. It is proposed that the basis for achieving this understanding lies in addressing the following issues:

(a) What are the defining properties of an asset or liability that affect its market value?

(b) What market (or markets) may exist for assets and liabilities with similar properties to those of the asset or liability to be measured, and if there is more than one market, what may explain any differences in their prices?

(c) What is the nature of costs that are incurred to carry out transactions, and are they entity-specific costs that can be distinguished from market value?

*Value-Affecting Properties*

The value-affecting properties of a contractual asset or liability flow from the contract, which provides the basis for deriving expected cash flows and defining and pricing the risks to which the asset or liability is exposed. (The term "contractual" is broadly interpreted to include written and oral agreements, constructive obligations, and rights and obligations that are imposed by statute or common law.) The value-affecting properties of a non-contractual asset include its physical characteristics, nature of ownership rights, location and condition on the measurement date.

Some believe that liabilities have unique properties that differ from their asset counterparts. This paper reasons that a promise to pay has the same market value affecting properties on recognition whether it is an asset or a liability, and that the credit risk associated with the promise to pay enters into the market's determination of its value as an asset or a liability.

A vital pre-condition in determining the value-affecting properties of assets and liabilities is to define the unit of account. This paper addresses unit of account issues relating to portfolio creation and levels of aggregation. Pending further study beyond the scope of this paper, it is proposed that:

(a) The appropriate individual item or portfolio unit of account on initial recognition is generally the unit of account in which the reporting entity acquires an asset or incurs a liability. That unit of account can generally be expected to reflect the value-affecting properties of that asset or liability on its initial recognition.

(b) The appropriate level of aggregation for non-contractual assets on initial recognition is the lowest level of aggregation at which an identifiable asset is ready to contribute to the generation of future cash flows through its use or sale.

Additional unit of account issues relating to contractual assets and liabilities and basket purchases are also considered.

*Markets and Market Sources*

Defining and applying the market measurement objective requires a number of issues to be addressed. These include defining "market", and defining and understanding (i) a sufficiency of information condition, (ii) information asymmetry, (iii) market accessibility, and (iv) multiple markets.

This paper proposes the following definition of "market":

> A body of knowledgeable, willing, arm's length parties carrying out sufficiently extensive transactions in an asset or liability to achieve its equilibrium price, reflecting the market expectation of earning or paying the market rate of return for commensurate risk on the measurement date.

It is presumed that market participants have reasonable access to publicly available information, and that there must be a minimal level of public information about an asset or liability to enable a market. This does not preclude the possibility of information asymmetry affecting the market price for an asset or liability. Information asymmetry exists when some market participants have, or are thought to have, information about value-affecting properties of an asset or liability that is not available to other market participants.

This paper suggests that, in many cases, the best source of market information on initial recognition will be the market in which the asset or liability to be measured was acquired or incurred. This is because the assets or liabilities traded in this market will generally have the same value-affecting properties as the asset or liability to be measured. However, there are some situations in which there will be no such entry market (for example, finished goods inventory of an acquired business), or entry market prices may not be relevant (possibly, for example, in respect of deposit liabilities and some

 

performance liabilities). In some of these cases, the most appropriate pricing source may be an exit market or equivalent. In any case, it is necessary to identify, and adjust for, any differences between the value-affecting properties of market-traded assets or liabilities and the asset or liability to be measured on the measurement date.

Questions have been raised with respect to market accessibility, and some Standards state that it is inappropriate to measure the market value of an asset or liability on the basis of a market that is not accessible to the reporting entity. It is important to define carefully what is meant by market accessibility and whether it may take different forms with different implications for accounting measurement. Some have associated accessible market values with amounts that would be received or paid to realize or settle immediately an asset or liability on a measurement date. Such amounts are not market values if they are determined on the basis of pre-existing contractual prepayment provisions or option exercise prices rather than open market transactions. There is no implication in the market measurement objective with respect to expectations for realizing, settling, holding, or using any asset or liability, beyond the general market expectation of highest and best use.

The possibility that different markets could exist with different prices for identical assets or liabilities seems inconsistent with the proposition that there can be only one market value for an asset or liability on a measurement date. However, it is acknowledged that multiple markets for identical assets or liabilities do exist, perhaps as a result of legislation, regulatory requirements, or licensing arrangements that impose market access restrictions. This paper proposes that research be undertaken on multiple market situations for seemingly identical assets or liabilities, the nature and causes of price differences between them, and their implications for market value measurement.

*Transaction Costs*

Transaction costs, defined as costs that market participants would not be expected to be compensated for, do not affect market values. However, under an entity-specific measurement objective, such costs might be added to the measure of an asset, or be deducted from the measure of a liability, on initial recognition on the basis of individual entity expectations that differ from market expectations.

## Conceptual Analysis - Reliability

The reliability of accounting measurements is based on three attributes: representational faithfulness, neutrality, and verifiability. Of these, the basic underpinning is provided by representational faithfulness. The appropriate starting point for an analysis of the reliability of a measurement basis is to examine what it purports to represent. Reliability is then assessed in terms of whether a measurement basis is able to represent what it purports to represent. This paper proposes that, when more than one measurement basis achieves an acceptable level of reliability, the most relevant of these bases should be selected.

Limitations on measurement reliability result from measurement uncertainty, which exists when the measure of an asset or liability on a measurement date could be a variety or range of different reasonably possible or justifiable amounts. Two sources of measurement uncertainty are identified:

(a) Estimation uncertainty, which involves estimates about uncertain existing conditions or future outcomes.

(b) Economic indeterminacy, which arises when the economic phenomenon to be measured cannot be defined in sufficiently concrete terms to permit valid quantification (that is, some significant value-affecting property of an asset or liability is unknown and unknowable).

It is well recognized and accepted that accounting measurement cannot avoid some degree of estimation uncertainty. The reliability of an estimation should be judged on the basis of the facts and the validity of assumptions on the measurement date, and not by the subsequent outcome. It is important to distinguish estimation uncertainty from volatility.

A basic economic indeterminacy results from arbitrary allocations or attributions. The problem arises when a measurement basis requires the cost or value of an item to be allocated among two or more assets or liabilities. This is known as the "one-to-many" attribution problem. It has been well demonstrated that there can be no unique non-arbitrary solution to a one-to-many or many-to-many allocation.

This paper proposes that the ability to provide useful disclosures about the measurement uncertainty of a measurement basis is an important factor in assessing its reliability. More specifically, it is proposed that a measurement basis should not be considered unreliable solely because it has wide range of measurement uncertainty, if relevant and reliable information can be provided that enables users to understand the basis for the single point selected and the nature and extent of the measurement uncertainty.

## Comparative Analysis of Identified Measurement Bases

Each of the identified measurement bases is examined in light of the preceding conceptual analysis. The following general conclusions are proposed:

(a) Fair value is the most relevant measure of an asset or liability on initial recognition. The relevance of fair value is, it is reasoned, based on it representing the essential properties of market value. The objective of fair value measurement is to reflect the market value of an asset or liability on a measurement date. If there is no observable market value for the asset or liability, the fair value objective is to estimate what the market value would be if a market existed, taking into account any liquidity limitations. The paper proposes that assets and liabilities should be measured at their fair value on initial recognition when fair value can be estimated with acceptable reliability. (Some question whether assets or liabilities that are acquired or incurred on the basis of earlier fixed-price contracts should be measured at their fair value on initial recognition or on the basis of their fair value on the inception of the earlier contract. This issue is discussed.)

(b) The above conclusion as to the relevance of fair value does not fully resolve the measurement issue, however, because the paper also concludes that fair value cannot be reliably measured in some common initial recognition situations. In such cases, it is proposed that a substitute be selected that can be reliably estimated. The substitute selected should be the one that is most consistent with fair value, and it should be applied on a basis that is as consistent as possible with the fair value measurement objective. Substitute bases should be described and explained in terms of what they are, and not purported to be fair value. A measurement that is significantly dependent on entity-specific expectations that cannot be demonstrated to be consistent with market expectations does not meet the conditions for being described as fair value.

## A Proposed Measurement Hierarchy on Initial Recognition

The proposed measurement objective on initial recognition is fair value or, when fair value cannot be estimated with adequate reliability, the best substitute for fair value. Based on the analysis of the properties of fair value and alternative measurement bases, the following hierarchy is proposed to implement this objective.

 

*Estimates of Fair Value — Levels 1 and 2*

This paper proposes that the fair value of an asset or liability can be estimated with an acceptable level of reliability on initial recognition when either of the following conditions is met:

Level 1 — There is an observable market price for assets or liabilities that are identical or similar to the asset or liability to be measured on or near the time of initial recognition, and reliable adjustment consistent with market expectations can be made for (i) any differences between the market-traded assets or liabilities and the asset or liability being measured and (ii) any time difference.

Level 2 — Failing an observable market price meeting the conditions of Level 1, there is an accepted model or technique for estimating the market price of the asset or liability to be measured on initial recognition, and all significant inputs reflect observable market prices or reliably measurable phenomena that can be expected to be the basis of market participants' determinations within the model or technique.

*Substitutes for Fair Value — Levels 3 and 4*

Level 3 — Estimates of current cost: Failing the ability to estimate fair value with acceptable reliability (that is, to meet the conditions of Level 1 or 2):

(a) an asset should be measured on initial recognition at its current cost, provided that this amount can be reliably estimated and can be reasonably expected to be recoverable; and

(b) a liability should be measured on initial recognition at its current consideration amount, provided that this amount can be reliably estimated and can be reasonably expected to represent the amount owed.

The paper proposes that current cost be interpreted to mean replacement cost when it is reliably measurable. However, it is reasoned that replacement cost as a substitute for fair value will not be capable of reliable determination for many assets on initial recognition. Failing the reliable measurement of replacement cost, current cost would be reproduction cost, when reproduction cost can be reliably determined. When the above conditions for the use of current cost, or current consideration amount, are not met, the paper proposes that historical cost is an acceptable substitute when it can meet these conditions. It is further suggested that, for practical purposes, a reliable historical cost measure of an asset or liability might be accepted in lieu of current cost on initial recognition, absent persuasive evidence that a reliable measure current cost would differ significantly from historical cost. The paper proposes that methods for attributing costs to assets or liabilities on initial recognition be selected to be as consistent as possible with the fair value measurement objective.

Level 4 — Models or techniques that depend significantly on entity-specific expectations: If the conditions of Level 1, 2, or 3 cannot be met, an asset or liability should be measured on initial recognition on the basis of an accepted model or technique. To the extent that reliable market-based data are unavailable, the measurement model or technique should use reliably estimable entity-specific data that are not demonstrably inconsistent with observable market expectations.

An important implication of the above measurement hierarchy is that, if none of the above measurement alternatives can be applied, the basic reliability condition for the recognition of an asset or liability has not been met.

The paper's analysis exposes a number of areas in which in-depth research is needed, and it makes some recommendations for such research.

## INVITATION TO COMMENT

Comments are sought on any aspect of this Discussion Paper. Answers to the following questions and the reasons for those answers would be particularly helpful.

Comments should be submitted by **19 May 2006**. All responses will be put on the public record unless the respondent requests confidentiality. However, such requests will not normally be granted unless supported by good reason, such as commercial confidence. If commentators respond by fax or email, it would be helpful if they could also send in a hard copy of their response by post.

Comments should preferably be sent by email to **ed.accounting@cica.ca** or addressed in writing to:

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Comments received will be analyzed by staff of the Canadian Accounting Standards Board. The analysis and copies of responses will be provided to the IASB so that they may be taken into account when the IASB proceeds to debate the issues and form its preliminary views.

## Questions

References to both the condensed version and main discussion paper are provided in the following questions.

Q1. Do you agree that the list of identified possible measurement bases (see paragraphs 33-51 of the condensed version and paragraphs 69-74 of the main discussion paper) sets out the bases that should be considered? If not, please indicate and explain any changes that you would make.

Q2. Do you agree with the working terms and definitions, and supporting interpretations, of each of the identified measurement bases (see paragraphs 33-51 of the condensed version and paragraphs 77-96 of the main discussion paper)? If not, please explain what changes you would make. In particular, do you have any comments on the term "fair value" and its definition (in light of the discussion in paragraphs 46-48 of the condensed version and paragraphs 88-93 of the main discussion paper)?

Q3. It is proposed that there are two fundamental sources of differences between the identified bases for measuring assets and liabilities on initial recognition:

(a) market versus entity-specific measurement objectives, and

(b) differences in defining the value-affecting properties of assets and liabilities.

(See paragraph 52 of the condensed version and paragraph 97 of the main discussion paper.) This proposal and its conceptual implications are the subject of chapters 4 and 5. Do you agree that these are the fundamental sources of differences between asset and liability measurement bases on initial recognition? If not, please indicate the fundamental sources of differences you have identified, and provide the basic reasons for your views. For any different fundamental sources you have identified, please indicate how these might be examined and tested.

Q4. The paper analyzes the market value measurement objective and the essential properties of market value.

(a) Do you believe that the paper has reasonably defined the market value objective and the essential properties of market value for financial statement measurement purposes (see paragraphs 54-56 and 105-112 of the condensed version and paragraphs 99-110 and 236-241 of the main discussion paper)? If not, please explain why not, and what changes you would propose, or different or additional considerations that you think need to be addressed.

(b) Do you agree with the proposed definition of "market" (see paragraphs 55-56 of the condensed version and paragraphs 107-110 of the main discussion paper)? If not, please explain why you disagree, and indicate any changes you would make and any issues that you believe should be given additional consideration.

(c) Do you agree with the fair value measurement objective as proposed, and its derivation from the market value measurement objective (see paragraph 102 of the condensed version and paragraphs 111, 228 and 229 of the main discussion paper)?

Q5. Do you agree with the definition and discussion of entity-specific measurement objectives (see paragraph 57 of the condensed version and paragraphs 112-116 of the main discussion paper) and their relationship to management intentions (see paragraph 58 of the condensed version and paragraphs 117-121 of the main discussion paper)? If not, please explain why you disagree.

Q6. Do you agree with the comparison of market and entity-specific measurement objectives (see paragraph 59 of the condensed version and paragraph 122 of the main discussion paper) and with the proposed conclusion that the market value measurement objective has important qualities that make it more relevant than entity-specific measurement objectives for assets and liabilities on initial recognition (see paragraphs 60-61 of the condensed version and paragraphs 123-129 of the main discussion paper)? If not, please explain your views.

Q7. (a) It is reasoned that there can be only one market (fair) value for an asset or liability on a measurement date (see paragraph 62 of the condensed version and paragraphs 131-138 of the main discussion paper). Do you agree with this conclusion? If not, please explain why you disagree.

(b) It is proposed that differences between apparent market values for seemingly identical assets or liabilities on initial recognition may be attributable to:

(i) differences between the value-affecting properties of assets or liabilities traded in different markets, or

(ii) entity-specific charges or credits.

(See paragraph 63 of the condensed version and paragraphs 131-138 of the main discussion paper). However, the paper notes the existence of multiple markets for some assets and liabilities, and the possibility that they may be due to market access restrictions that require further investigation (see paragraphs 74-82 of the condensed version and paragraphs 95-109 of the main discussion paper).

Do you agree with these proposals, within the caveats and discussion presented? If not, please explain why you disagree.

Q8. Do you agree that a promise to pay has the same fair value on initial recognition whether it is an asset or a liability, and that the credit risk associated with a promise to pay enters into the determination of that fair value with the same effect whether it is an asset or liability (see paragraph 65 of the condensed version and paragraphs 142-147 of the main discussion paper)? If you do not agree, please explain the basis for your disagreement.

Q9. The paper makes the following proposals with respect to defining the unit of account of the asset or liability to be measured on initial recognition:

(a) The appropriate individual item or portfolio unit of account on initial recognition is generally the unit of account in which the reporting entity has acquired the asset or incurred the liability (see paragraphs 67-70 of the condensed version and paragraphs 149-154 of the main discussion paper).

(b) The appropriate level of aggregation for non-contractual assets on initial recognition is the lowest level of aggregation at which an identifiable asset is ready to contribute to the generation of future cash flows through its sale or use (see paragraphs 71-73 of the condensed version and paragraphs 157-161 of the main discussion paper).

Do you agree with these proposals within the caveats and discussion presented? If not, please explain why, and in what respects, you disagree.

Q10. It is suggested that, in many cases, the best market source on initial recognition is the market in which the asset or liability being measured was acquired or issued. However, some significant situations are noted in which a different source may be appropriate, and research is proposed into possible multiple markets (see paragraphs 75-82 of the condensed version and

 

paragraphs 162-182 of the main discussion paper). Do you agree that the paper provides a reasonable analysis of market sources and their implications on initial recognition? If not, please provide reasons for disagreeing, and indicate any additional analysis or research you would think should be carried out.

Q11. The paper concludes that transaction costs, as defined, are not part of the fair value of an asset or liability on initial recognition (see paragraphs 86-87 of the condensed version and paragraphs 193-200 of the main discussion paper). Do you agree with the proposed definition of transaction costs? Do you agree with the above conclusion? If you disagree, please explain your reasons and what you believe the implications of your different view would be for fair value measurement of assets and liabilities on initial recognition.

Q12. Do you agree with the proposal that, when more than one measurement basis achieves an acceptable level of reliability, the most relevant of these bases should be selected (see paragraph 89 of the condensed version and paragraph 202 of the main discussion paper)? If not, please explain why you disagree, and indicate how you would settle trade-offs between the relevance and reliability of alternative measurement bases.

Q13. Do you agree with the two proposed sources of limitations on measurement reliability — estimation uncertainty and economic indeterminacy — and supporting discussion (see paragraphs 90-100 of the condensed version and paragraphs 204-216 of the main discussion paper)? If not, please explain your view.

Q14. Do you agree that fair value is the most relevant measure of assets and liabilities on initial recognition of assets and liabilities, and therefore should be used when it can be estimated with acceptable reliability (see analyses of fair value and alternative bases in chapter 7, and discussion of measurement date on initial recognition in paragraphs 179-180 of the condensed version and paragraphs 410-415 of the main discussion paper)? If not, please explain why.

Q15. Do you agree that fair value is not capable of reliable estimation in some common situations on initial recognition (see paragraph 104 of the condensed version and paragraphs 232-277 of the main discussion paper)? More specifically, do you agree that:

(a) A single transaction exchange price should not be accepted to be equal to fair value unless there is persuasive evidence that it is (see paragraphs 106-114 of the condensed version and paragraphs 243-252 of the main discussion paper), and

(b) A measurement model or technique cannot be considered to achieve a reliable estimation of the fair value of an asset or liability when the estimate depends significantly on entity-specific expectations that cannot be demonstrated to be consistent with market expectations (see paragraphs 115-118 of the condensed version and paragraphs 263-268 of the main discussion paper)?

Please provide explanations for your views on these questions if they differ significantly from the conclusions and supporting arguments presented in the paper.

Q16. Do you agree with the paper's analyses and conclusions with respect to the comparative relevance and reliability of:

(a) historical cost (see paragraphs 120-137 of the condensed version and paragraphs 281-319 of the main discussion paper);

(b) current cost - reproduction cost and replacement cost (see paragraphs 138-154 of the condensed version and paragraphs 320-361 of the main discussion paper);

(c) net realizable value (see paragraphs 155-161 of the condensed version and paragraphs 362-375 of the main discussion paper);

(d) value in use (see paragraphs 162-169 of the condensed version and paragraphs 376-392 of the main discussion paper); and

(e) deprival value (see paragraphs 170-178 of the condensed version and paragraphs 393-409 of the main discussion paper)?

(f) Please provide reasons for any disagreements, and any advice you may have as to additional analysis or research that you believe should be carried out.

Q17. The paper discusses substitutes for fair value when the fair value of an asset or liability cannot be reliably estimated on initial recognition. Do you agree that, when other measurement bases are used as substitutes for fair value on initial recognition, they should be applied on bases as consistent as possible with the fair value measurement objective (see paragraph 186 of the condensed version and paragraph 417 of the main discussion paper)? If not, please explain why.

Q18. Do you agree with the proposed hierarchy for the measurement of assets and liabilities on initial recognition (see chapter 8)? If not, please explain your reasons for disagreeing and what alternatives you might propose.

Q19. Do you have comments on any other issues or proposals, including the proposals for further research (see paragraph 189 of the condensed version and paragraph 441 of the main discussion paper)? If so, please provide them.

# PART I: MEASUREMENT BASES PROJECT

## Chapter 1 — Purpose of Project and Scope

### Purpose and Importance

1. At the request of the International Accounting Standards Board (IASB), the staff of the Canadian Accounting Standards Board (AcSB) has undertaken a preliminary investigation of measurement bases in financial accounting. This research project is undertaken on the basis of input from, and discussions with, members of the IASB and participating national standard setters. However, its content has not been deliberated by the IASB or national standard setters.

2. Part I (chapters 1 and 2) addresses the basis for the project as a whole. Part II (chapters 3-8) addresses the first stage of the project — measurement on initial recognition.

3. The purpose of the project is to identify, consider, and make recommendations with respect to, issues related to the selection of an appropriate basis, or set of bases, for measuring assets and liabilities recognized in financial statements. The project is intended to provide the IASB and national standard setters with a basis for initiating active projects to:

   (a) revise and expand the measurement aspects of their conceptual frameworks; and

   (b) improve the measurement requirements of their financial reporting standards.

   The project may also provide insights on related disclosure matters.

4. In analyzing possible measurement bases and the ways in which they might be applied, separately or in combination, the project will identify and evaluate the underlying objectives of those bases and their key attributes.

#### *What Does Measurement Encompass?*

5. The IASB *Framework for the Preparation and Presentation of Financial Statements* states:

   > "Measurement is the process of determining the monetary amounts at which the elements of the financial statements are to be recognised and carried in the balance sheet and income statement. This involves the selection of the particular basis of measurement." (paragraph 99)

   Other conceptual frameworks go further to indicate that measurement also involves selecting the monetary unit (encompassing the currency in which the monetary unit is to be expressed and the translation of amounts denominated in other currencies, and any purchasing power adjustments to the monetary unit).

6. Measurement is necessary in financial accounting in the following circumstances:

   (a) Initial recognition of an item in financial statements (with "recognition" defined in the IASB *Framework* as "... the process of incorporating in the balance sheet or income statement an item that meets the definition of an element and satisfies the criteria for recognition ..." (paragraph 82).

   (b) Re-measurement of a previously recognized asset or liability, when events or circumstances are considered to require it. Re-measurement may be considered necessary, for example, to reflect recognized asset impairment, and to systematically adjust the carrying amounts of certain assets and liabilities to reflect current values.

7. For the purposes of this paper, the re-measurement of existing assets or liabilities (sometimes referred to as "fresh-start measurements") is defined in the Glossary of terms in the FASB's Statement of Financial Accounting Concepts No. 7, *Using Cash Flow Information and Present Value in Accounting Measurements* (CON 7): "Measurements in periods following initial recognition that establish a new carrying amount unrelated to previous amounts and accounting conventions." Re-measurements exclude changes in the carrying amounts of assets or liabilities resulting from amortization or accruals. For example, the depreciation of the cost of a fixed asset to its estimated residual value over its estimated useful life,[1] and the accrual of interest on a monetary asset or liability carried on a cost basis, are not considered to be re-measurements.

### *Why Do Standard Setters Need to Address the Bases of Measurement?*

8 Existing measurement standards and practices are inconsistent, and a number of significant measurement issues remain unsettled or have been dealt with unsatisfactorily. In particular:

(a) Certain standards permit a choice between fundamentally different measurement bases. For example, IAS 16 *Property, Plant and Equipment* and IAS 40 *Investment Property* each permit entities to choose between cost-based and "fair value" based measurement.[2]

(b) Some items are accorded inconsistent measurement treatments in accounting standards. For example, IASB and FASB standards differ on the measurement of impaired assets, and there are conflicting treatments of financing costs in the measurement of self-constructed assets under various sets of standards.

(c) Some standards reflect more or less arbitrary mixed measurement compromises pending resolution of conflicting views on appropriate measurement bases, as in the current standards on financial instruments and hedge accounting.

The lack of an agreed, coherent measurement theory has impeded the advancement of accounting standards.

9. The measurement provisions in existing conceptual frameworks are limited and out of date. The section of the IASB *Framework* entitled "Measurement of the Elements of Financial Statements" is extremely brief, consisting of three paragraphs. It notes:

> "The measurement basis most commonly adopted by entities in preparing their financial statements is historical cost. This is usually combined with other measurement bases." (paragraph 101)

10. The IASB *Framework* lists four possible bases: historical cost, current cost, realizable (settlement) value, and present value. Fair value is not included in this list, although it is used in several IASB standards. Present value is listed as if it were a separate measurement basis in itself, rather than a technique that can be used to estimate measurements under several different bases. Paragraph 100 of the IASB *Framework* observes that: "A number of different measurement bases are employed to different degrees and in varying combinations in financial statements." However, it provides no conceptual basis for determining when or under what circumstances a particular measurement basis should be used.

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[1] A re-estimation of the residual value of a depreciable asset subsequent to initial recognition would presumably be a re-measurement, however.

[2] While IAS 16 uses the term "fair value", the envisaged measurement may not be fully consistent with the concept of fair value that will be developed in this paper.

 

11. Conceptual frameworks in other jurisdictions have similar limitations, except that those of the FASB and U.K. Accounting Standards Board (ASB) are further developed in certain respects. In particular:

    (a) The FASB issued CON 7 in 2000. It provides a framework for using cash flow information and the principles that it reasons should govern the use of present value, both in measurements on initial recognition and when fresh-start measurements are required. It concludes that the only objective of present value in such measurements is to estimate fair value (paragraph 25).

    (b) The ASB's *Statement of Principles for Financial Reporting*, issued in 1999, concludes that different measurement bases will be relevant in different circumstances, and it proposes that when a current value is appropriate, the "deprival value" concept (also known as the "value to the business" concept) is most relevant (paragraphs 6.6-6.9).

    The concepts statements of the FASB and ASB cited above seem to be espousing different measurement bases, at least in respect of re-measurements, although the frames of reference for the two statements are somewhat different.

## Scope

12. The focus of this preliminary investigation is on essential primary issues, with deferral of what are considered to be second order issues to later stages of analysis or for consideration in other projects. With this in mind, this preliminary investigation does not deal with:

    (a) changes in the purchasing power of the monetary unit, i.e., inflation/deflation effects (although consideration will be given to the relative abilities of different measurement bases to reflect the effects of specific price changes);

    (b) the implications of different measurement bases for reporting financial performance — this is the subject of a separate joint project of the IASB and FASB (although the implications of asset and liability measurement for reporting income will be considered, recognizing that some measurement bases are premised in part on certain income recognition and capital maintenance concepts);

    (c) foreign currency translation issues;

    (d) income tax issues (in other words, to simplify the analysis in this paper, it is assumed that there are no income taxes);

    (e) issues unique to particular industries; or

    (f) assets and liabilities arising from non-arm's length transactions.[3]

    Standards related to the above topics may well require some reconsideration depending on the outcome of the analysis of measurement bases.[4]

[3] The term "non-arm's length transactions" used in this paper is intended to be generally consistent with the term "related party transactions" as defined in accounting standards of, for example, the IASB and FASB.

[4] Not-for-profit activities in the private sector, public sector or government are also not included within the scope of this project since IASB standards are not designed to address them. The activities of government business entities do fall within the scope of the project because IASB standards are applicable to such entities (*Preface to International Financial Reporting Standards*, paragraph 9).

### *Recognition and Measurement Interdependencies*

13. This project addresses measurement bases for assets and liabilities *that are recognized in financial statements*. It does not deal with when assets or liabilities should be recognized initially or when re-measurement of existing assets or liabilities should take place. It also does not address the basis for measuring amounts required in supplementary financial statement disclosures, although some of the discussion may be pertinent to that issue. Rather, the question of what is an appropriate measurement basis is considered to arise when accounting standards require initial recognition or re-measurement.

14. However, there are significant interdependencies between recognition and measurement that cannot be ignored. In particular, one of the criteria for recognition of an asset or liability is that "the item has a cost or value that can be measured with reliability" (IASB *Framework*, paragraph 83(b)). The conceptual frameworks of national standard setters contain a similar condition. One might be tempted to argue that, since measurement reliability is a condition for recognition, it falls within the ambit of recognition concepts and principles rather than within this project to address measurement bases for assets and liabilities that have been recognized. This argument is not convincing, however, because reliability is clearly an essential consideration in assessing possible measurement bases. Thus, measurement reliability, and its interdependent implications for recognition and measurement, are considered to be within the scope of this preliminary investigation.

15. In addition, there are some significant inconsistencies between certain of the possible measurement bases and existing recognition concepts and standards. Two such inconsistencies are:

    (a) A number of conceptual frameworks hold that the recognition of an asset (liability) should be dependent on it being probable that associated future benefits (sacrifices) will flow to (from) the entity.[5] Under the fair value measurement basis, the probability of future benefit (sacrifice) enters into the determination of fair value.

    (b) There may be questions relating to reconciling recognition and measurement principles when an agreed measure of the recoverable amount of an asset is less than its carrying amount but standards for recognition of impairment delay the recognition of that lower value.

    While this investigation of measurement bases will not address when assets or liabilities should be initially recognized or re-measured, it will note apparent inconsistencies between existing recognition criteria and measurement bases, and make a preliminary assessment of their possible implications for measurement and recognition.

## Stages of the Project

16. The preliminary investigation will proceed in stages. The first stage involves analyzing alternative bases for measurement on initial recognition of assets and liabilities, which is the subject of Part II of this paper. Subsequent stages will analyze alternative bases for re-measurement of existing assets and liabilities when accounting standards require re-measurement, and will include consideration of measurement upon the recognition of asset impairment.

17. Stage 1 is to be completed and the results considered before subsequent stages are undertaken, because the results of the analyses under Stage 1 could have important implications for re-measurement.

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[5] See, for example, IASB *Framework*, paragraphs 83, 85, and 91.

 

### *Some Considerations Relating to Measurement on Initial Recognition*

*Significance of Issues*

18. Some may believe that there are few substantive issues regarding measurement on initial recognition of assets and liabilities. They may expect that different measurement bases, for example, historical cost and fair value, are likely to yield the same or very similar values on initial recognition.

19. In fact, there are significant circumstances in which material differences can arise. For example, suppose that an entity constructs a plant for which it determines the historical cost to be 1.5 million, while its fair value is determined to be 1.0 million. If these are both known and verifiable amounts, which basis (historical cost or fair value) might be reasoned to be the more appropriate measurement? Of course, the choice of possible measurement bases here is not this simple. Could it depend, for example, on whether the entity believed it could recover the 1.5 million historical cost from its future operations and, if so, what should be the basis for determining this recoverable amount at the time of initial recognition? Further, how defensible is the cost determination of 1.5 million? Certainly, there are significant questions in theory and practice related to defining the basis of cost measurement on initial recognition, for example, the treatment of:

    (a) interest on debt financing (and perhaps also on the cost of equity capital),

    (b) construction inefficiencies (or efficiencies) and what they should be measured against, and

    (c) the basis for overhead allocations.

20. There are also significant issues relating to the definition of the fair value measurement basis that could result in questions about the 1.0 million amount in the example above. Should it be an estimate of its market entry value; if so, should this include the amounts of transaction costs (for example, legal costs, taxes, and real estate commission charges) that would have to be incurred by the buyer in a purchase transaction? Alternatively, should the objective of the fair value measurement basis be to estimate the market exit value, that is, the market selling price for the plant at the time of its initial recognition? (And what are the sources of differences between entry and exit values?) Each of these possibilities has advocates, and existing standards and the thinking supporting them differ substantially on a number of these basic matters.

*Relationship to Re-measurement*

21. While it has been agreed that it is most productive to focus first on measurement on initial recognition, there is not a clean division between initial measurement and re-measurement. The adoption of particular measurement bases on initial recognition might limit or preclude some alternatives on re-measurement. As a possible example, if fair value were to be determined to be the most relevant measurement basis on initial recognition, it might be difficult to justify the relevance of another basis (say, current cost) on re-measurement. Therefore, any conclusions reached with respect to measurement on initial recognition are necessarily tentative and subject to reassessment when their potential implications for re-measurement are considered.

*Measurement of Asset Impairment*

22. Alternative bases of measuring impaired assets belong in analysis of re-measurement. The measurement of asset impairment is closely connected with measurement on initial recognition of assets, in that impairment could exist virtually simultaneously with initial recognition, and it will be seen that recoverable amount determinations serve as a check on some measures of asset value on initial recognition. However, since recoverable amount measurements on asset impairment involve significant additional issues, they are best addressed as part of the re-measurement stage.

## Analytical Approach

23. A comprehensive analysis of possible measurement bases requires both a deductive ("top down") and an inductive ("bottom up") analysis. Both facets of this analysis are based in large part on inputs received from, and exchanges of views with, members of the IASB and participating national standard setters.[6]

### *Deductive Analysis*

24. The project staff has received papers, conceptual frameworks, background and reference materials from the staffs of the IASB and participating national standard setters that they believed should be studied in assessing measurement bases. The project staff has also considered issues relating to measurement that have been addressed in recent standards and proposals of the IASB and national standard setters. Accepted framework concepts provide the basic point of departure, particularly the decision usefulness objective of accounting, the qualitative characteristics of useful financial information, and concepts of "assets" and "liabilities" (see the analysis of these concepts in developing criteria for evaluating measurement bases in paragraphs 28-54).

### *Inductive Analysis*

25. The AcSB project staff also received information on existing standards and practice on measurement from the IASB and each participating national standard setter. These standards were analyzed to help in:

    (a) ensuring identification of major measurement approaches and attendant issues as well as important differences in thinking and the possible bases for them; and

    (b) establishing a basis for testing whether and how alternative measurement approaches could be applied to typical situations.

26. This paper concludes that a deductive (top down) approach is most useful in developing conceptual theories and hypotheses concerning the various possible measurement bases. The inductive analysis is expected to serve primarily as a "reality check" on the conceptual analysis and tentative working conclusions derived from it. It is emphasized that the inductive analysis of current standards has not been carried out in great depth in this preliminary investigation, but only in so far as to try to identify major issues that need to be addressed.

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[6] These were national standard setters that had a liaison relationship with the IASB at the inception of this project. These were standard setters in Australia, Canada, France, Germany, Japan, New Zealand, the United Kingdom, and the United States.

### *Terminology*

27. Different terms have been used in various jurisdictions to describe the same measurement bases, and certain terms (such as "fair value") have been defined in somewhat different words. Some of these definitions are dated, in that they do not reflect developments that have been recognized in the definitions used in some jurisdictions. Appendix A sets out a glossary of significant terms and definitions used in this paper. One objective of this paper is to propose a common set of terms and definitions that are consistent with the underlying measurement bases and supporting concepts.

# Chapter 2 — Criteria for Evaluation

28. An evaluation of possible measurement bases requires an agreed set of criteria that can be applied to each basis. Without agreed criteria for evaluation, any comparison of measurement bases will be unfocused and less likely to achieve consensus around a particular basis or set of bases. The same set of criteria must be applied to all of the bases to obtain a useful result. The criteria should be independent of the various measurement bases to be evaluated, in order to minimize any bias in the evaluation. Accordingly, the first step in the analysis is to establish evaluation criteria.

29. This paper proceeds on the basis that these criteria should be developed from, and be consistent with, the objectives for financial reporting, qualitative characteristics, and definitions of the elements of financial statements that are contained in the existing conceptual frameworks of accounting standard setters. The conceptual frameworks of the IASB and national standard setters were designed to provide the foundation for the development of sound accounting principles and standards for recognition, measurement, presentation, and disclosure. Thus, these conceptual frameworks should provide the primary source of criteria for evaluating measurement bases. The IASB and participating national standard setters have adopted similar objectives for financial reporting, qualitative characteristics of useful financial information, and definitions of the elements of financial statements. Primary reference will be made to the IASB *Framework*, but reference will be made to the frameworks of national standard setters where they provide additional information or are further developed in some respects that have implications for measurement. [7]

## Key Aspects of Conceptual Frameworks

### *Objectives of Financial Reporting*

30. The frameworks begin with a statement of the objectives of financial reporting. The IASB *Framework*, in common with those of participating national standard setters, identifies decision usefulness as the primary objective. Paragraph 12 states:

> "The objective of financial statements is to provide information ... that is useful to a wide range of users in making economic decisions."

31. The basic objective of decision usefulness is generally defined to give prominence to usefulness for predictive purposes, and to feedback value in relation to predictive purposes (see following discussion on relevance). However, all frameworks also mention a stewardship objective. The IASB *Framework* (paragraph 14) observes that:

> "Financial statements also show the results of the stewardship of management, or the accountability of management for the resources entrusted to it. Those users who wish to assess the stewardship or accountability of management do so in order that they may make economic decisions; these decisions may include, for example, whether to hold or sell their investment in the entity or whether to reappoint or replace the management."

32. FASB Statement of Financial Accounting Concepts No. 2, *Qualitative Characteristics of Accounting Information* (CON 2), emphasizes that:

> "... decision making and stewardship are interrelated accounting objectives. Indeed, the stewardship role of accounting may be viewed as subordinate to and a part of the decision making role, which is virtually all encompassing." (paragraph 28)

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[7] See Appendix B, *Note on Conceptual Frameworks*, for a comparative analysis of certain aspects of the conceptual frameworks of the IASB, Australia, Canada, New Zealand, the United Kingdom and the United States.

33. Stewardship has come to be defined in broad terms. FASB Statement of Financial Accounting Concepts No. 1, *Objectives of Financial Reporting by Business Enterprises* (CON 1), observes:

> "Management of an enterprise is periodically accountable to the owners not only for the custody and safekeeping of enterprise resources but also for their efficient and profitable use and for protecting them to the extent possible from unfavorable economic impacts of factors in the economy such as inflation or deflation and technological and social changes." (paragraph 50)

### *Qualitative Characteristics*

34. Qualitative characteristics are the attributes that make the information provided in financial statements useful; they give information decision usefulness. The IASB *Framework* states that the four principal qualitative characteristics are understandability, relevance, reliability, and comparability. The frameworks of participating national standard setters identify the same fundamental qualities, although there are some differences between these frameworks in how the attributes of these qualities are developed and described (see Appendix B).

#### *Understandability*

35. It is considered essential that financial statement information be understandable by users. However, it is emphasized that:

> "For this purpose, users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence." (IASB Framework, paragraph 25)

#### *Relevance*

36. Financial information is considered to be relevant "... when it influences the economic decisions of users ..." (IASB *Framework*, paragraph 26). Paragraphs 46-57 of the FASB's CON 2 elaborate on this characteristic. In particular, CON 2 describes relevance in the following terms:

> "To be relevant to investors, creditors, and others for investment, credit, and similar decisions, accounting information must be capable of making a difference in a decision by helping users to form predictions about the outcomes of past, present, and future events or to confirm or correct expectations." (paragraph 47)

Thus, relevance is generally considered to encompass two fundamental dimensions – predictive value and feedback value. The frameworks of some national standard setters consider timeliness to be an important attribute of relevance.[8]

#### PREDICTIVE VALUE

37. The IASB *Framework* states in part:

> "The economic decisions that are taken by users of financial statements require an evaluation of the ability of an entity to generate cash and cash equivalents and of the timing and certainty of their generation." (paragraph 16)
>
> "Information about the economic resources controlled by the entity and its capacity in the past to modify these resources is useful in predicting the ability of the entity to generate cash and cash equivalents in the future." (paragraph 16)

[8] The IASB *Framework* also indicates that timeliness is an important attribute, but sets it out as a general constraint on relevant and reliable information (paragraph 43).

38. To say that accounting information has predictive value is not to say that it must itself be a prediction. Paragraph 28 of the IASB *Framework* notes: "To have predictive value, information need not be in the form of an explicit forecast." Paragraph 48 of CON 2 further observes: "Information about the present status of economic resources or obligations or about an enterprise's past performance is commonly a basis for expectations (CON 1, paragraph 42)." FASB Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises* (CON 5) goes on to emphasize that:

> "A statement of financial position does not purport to show the value of a business enterprise [footnote omitted] but, together with other financial statements and other information, should provide information that is useful to those who desire to make their own estimates of the enterprise's value." (paragraph 27)

#### FEEDBACK VALUE

39. Paragraph 27 of the IASB *Framework* and corresponding material in other frameworks discuss the confirmatory role of financial information. CON 2 states:

> "Information that was not known previously about a past activity clearly reduces uncertainty about its outcome, and information about past activities is usually an indispensable point of departure for attempts to foresee the consequences of related future activities." (paragraph 52)

### *Reliability*

40. "Information has the quality of reliability when it is free from material error and bias and can be depended upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent." (IASB *Framework*, paragraph 31)

41. Reliability may be considered to have three interrelated aspects:[9]

    (a) Representational faithfulness — the correspondence of a measure with the economic phenomenon that it purports to represent.

    (b) Neutrality — freedom from bias.

    (c) Verifiability — knowledgeable and independent observers (including auditors) would concur as to, for example, the amount resulting from applying a particular measurement basis, within a reasonable degree of precision.

#### REPRESENTATIONAL FAITHFULNESS

42. CON 2 states:

> "Representational faithfulness is correspondence or agreement between a measure or description and the phenomenon it purports to represent. In accounting, the phenomena to be represented are economic resources and obligations and the transactions and events that change those resources and obligations. [footnote omitted] Clearly, much depends on the meaning of the words 'purports to represent' .... " (paragraphs 63 and 64)

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[9] These three aspects are explicitly stated in some frameworks, for example in those of the FASB and the Canadian Accounting Standards Board, but are set out in somewhat different terms in some other frameworks (see Appendix B, *Note on Conceptual Frameworks*). The IASB *Framework* identifies "faithful representation" and "neutrality" and adds "substance over form" (included by others in representational faithfulness), and "prudence" and "completeness" (included by others as part of the concept of neutrality). The IASB *Framework* does not specifically identify "verifiability", but it does mention freedom from material error as an element of reliability.

 

43. CON 2 illustrates that statement by referring to potential allocation difficulties in determining the cost of acquiring assets, observing that: "Thus, it may not be certain that the cost for the asset in the enterprise's records does faithfully represent its cost" (paragraph 65). Supporting explanations also emphasize that:

    (a) Information is representationally faithful only when it is free of deliberate misrepresentations and measurements based on the form rather than the substance of an item.

    (b) Amounts need not be determined with perfect precision and accuracy to be representationally faithful; a well-based estimate is often suitable for the purposes of financial statement users.[10]

#### NEUTRALITY

44. In assessing neutrality, the concept of prudence (or conservatism) needs to be put in context. "Prudence is the inclusion of a degree of caution in the exercise of the judgements needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated" (IASB *Framework*, paragraph 37). However, it is emphasized that the exercise of prudence does not permit the deliberate understatement of assets or overstatement of liabilities, because the financial statements would then not be neutral. Neutrality also encompasses completeness, that is: "To be reliable, information in financial statements must be complete within the bounds of materiality and cost" (IASB *Framework*, paragraph 38).

#### *Comparability*

45. Comparability is: "The quality of information that enables users to identify similarities in and differences between two sets of economic phenomena" (CON 2, Glossary of terms). The IASB *Framework* states that users must be able to compare financial information of an entity through time and between different entities (paragraph 39).

### *Economic Purposes and Their Embodiment in "Assets" and "Liabilities"*

46. Elements of financial statements are the building blocks with which financial statements are constructed. The presumption is that to meet the above objectives and qualitative characteristics of useful financial information, financial statements should provide information about the economic resources (assets) and the claims to those resources (liabilities and equity). The focus of this project is on "assets" and "liabilities" because these are the primary subject of accounting measurement.[11] The IASB *Framework* (paragraph 49) defines these elements as follows:

    > "An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity."
    >
    > "A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits."

    The effects of alternative measurement bases on reported income and equity will also be taken into account.

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[10] See commentary in the IASB *Framework*, paragraphs 33-35; CON 2, paragraphs 63-76; and *Statement of Principles for Financial Reporting*, paragraphs 3.9-3.14.

[11] Equity is treated as a residual. The IASB *Framework* defines equity as "the residual interest in the assets of the entity after deducting all its liabilities" (paragraph 49(c)).

47. The conceptual frameworks for financial reporting are founded on presumed economic purposes of business entities. It is presumed that, for financial reporting purposes, the primary purpose of business entities is to create wealth,[12] which is expressed in terms of money and is ultimately conceived as command over cash, or claims to expected future cash or cash-equivalent flows. Thus, an entity may be presumed to invest in assets, regardless of their form, for the future net cash-equivalent flows that they can be expected to generate.[13] The FASB's CON 1 recognizes this in observing:

> "People engage in investing, lending, and similar activities primarily to increase their cash resources. The ultimate test of success (or failure) of those activities is the extent to which they return more (or less) cash than they cost. [footnote omitted]" (paragraph 38)
>
> "Business enterprises, like investors and creditors, invest cash in noncash resources to earn more cash." (paragraph 39)

Although investors and creditors are generally interested in net cash-equivalent flows of the entity as a whole,[14] those amounts are the aggregate of a number of individual cash-equivalent flows related to individual assets and liabilities, or related groups of assets and liabilities, within the entity.

48. Thus, information on the amounts (value), timing and uncertainty of cash-equivalent flows is considered to be the primary focus of financial accounting. A consequence of this is that "assets" (economic resources ultimately reflecting expected direct or indirect cash flows or cash-equivalent benefits) and "liabilities" (present obligations reflecting expected outflows of economic resources, ultimately cash or cash-equivalent outflows) are the basic subject matter of financial accounting measurement. Since it is the cash-equivalent expectations attribute of assets and liabilities that is the primary focus of business activities, it seems appropriate to conclude that this attribute should be the primary focus of accounting measurement.[15]

49. A focus on cash-equivalent expectations is not intended to imply that the appropriate basis for measuring individual assets and liabilities is necessarily an exit value such as net realizable value. The relationship between the expected cash-equivalent flows of an entity as a whole, or of business segments, and the contribution of individual assets and liabilities to those flows is a complex issue that is discussed in subsequent chapters of this paper.

### *Concepts of Capital and Capital Maintenance*

50. Most conceptual frameworks include some discussion of alternative concepts of capital and capital maintenance (see, for example, IASB *Framework*, paragraphs 102-110). The relationship between capital maintenance concepts and possible bases for measuring assets and liabilities needs to be clearly understood. The concept of capital maintenance adopted for financial accounting purposes defines how net income is to be determined. From a capital maintenance

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[12] Business entities create wealth through the production and sale of goods and the provision of services. The various means of creating wealth do not affect this purpose of business entities.

[13] Assets may contribute in various ways, directly or indirectly, to an entity's future net cash-equivalent flows. For example, some assets may be acquired for resale, others to add directly to the production of goods for sale, and others to reduce cash outflows that would otherwise be required, for example, by reducing the cost of operations.

[14] This generalization is not true in all cases. For example, some creditors with security interests in specific assets or groups of assets may be more interested in the cash-equivalent flows associated with those assets than the cash-equivalent flows of the entity as a whole.

[15] This is not to say that an entity's balance sheet can capture all information about its expected future cash or cash equivalent flows.

 

perspective, net income is the increase in the reported value of an entity's net assets in a period after any provision necessary to maintain its capital. The basis for measuring capital to be maintained determines the basis for distinguishing return *on* capital (net income) from return *of* capital.

51. The evaluation of alternative capital maintenance concepts as a basis for determining net income to be reported is outside the scope of this paper. However, the selection of a basis for measuring the assets and liabilities of an entity has implications for the measurement of capital to be maintained, and different measurement bases have different capital maintenance attributes. For example, the IASB *Framework* notes that:

> "The physical capital maintenance concept requires the adoption of the current cost basis of measurement. The financial capital maintenance concept, however, does not require the use of a particular basis of measurement. Selection of the basis under this concept is dependent on the type of financial capital that the entity is seeking to maintain." (paragraph 106)

Thus, it is important to consider any capital maintenance implications of particular measurement bases. In addition, conclusions reached on appropriate asset and liability measurement bases may require some changes to existing conceptual framework discussions of capital maintenance.

### *Cost/Benefit Constraints*

52. The IASB *Framework* states that: "The benefits derived from information should exceed the cost of providing it" (paragraph 44). Other frameworks contain similar statements. All frameworks note the difficulties of balancing costs and benefits, and acknowledge that this is substantially a judgmental process. Both benefits and costs may vary considerably, depending on the circumstances and the nature of the asset or liability being measured. Although the process of balancing costs and benefits is subjective and particularly difficult to do, it is clearly an important criterion in evaluating measurement bases.

53. In considering cost/benefit constraints, it is important to identify the various types of costs and who bears them, and the various types of benefits and who enjoys them. Most of the costs of providing financial information fall initially on the entity,[16] while the benefits are received by both the entity and external users of the information. In particular, the users of financial statements derive a primary benefit of financial information in making and confirming predictions. The costs to entities are generally more directly observable and quantifiable than benefits, but this does not mean that these benefits are less important. For example, improved financial information for users that reduces information uncertainty and increases decision usefulness can have a substantial economic benefit in reducing the cost of capital of business entities, and perhaps in contributing to improving the credibility of capital markets. As well, consideration should be given to possible effects of alternative accounting measurements on the costs of analysis and interpretation of financial information.[17]

### *Summary of Criteria*

54. In summary, the primary criteria for evaluating possible measurement bases, derived from the conceptual frameworks, are:

    (a) Decision usefulness

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[16] Of course, such costs ultimately fall on the owners (shareholders) of the entity because they reduce an entity's reported income and thus have implications for the value of the business.

[17] Paragraphs 133-144 of CON 2 discuss these and other costs and benefits that should be taken into account, at least in general terms, in evaluating alternative measurement bases.

(b) Qualitative characteristics of useful information

- Understandability
- Relevance — predictive value, feedback value, timeliness
- Reliability — representational faithfulness, neutrality, verifiability
- Comparability

(c) Concepts of assets and liabilities

- How the expected cash-equivalent flow attribute of assets and liabilities is measured

(d) Cost/benefit considerations

### Limitations of Framework Concepts

55. The above financial reporting objectives, qualitative characteristics, and definitions of elements establish the agreed fundamental qualities of useful financial information. They narrow the rationally acceptable possibilities, but they are not sufficient, in themselves, for achieving agreement on a single measurement basis or on how to choose between different bases in different circumstances. The inability of conceptual frameworks to resolve measurement issues has been observed earlier, in paragraphs 8-11. The following statement in the Preface to the IASB *Framework* strongly suggests that that *Framework* is not intended to resolve measurement issues: "This Framework has been developed so that it is applicable to a range of accounting models and concepts of capital and capital maintenance" (last sentence of the final paragraph).

56. More specifically, existing framework objectives would appear to be capable of different interpretations in support of different measurement bases. For example, the predictive value of a fair value measurement is premised on the capital market's expectations to achieve the market rate of return for equivalent risk at the measurement date, while a value in use measurement is based on management's intentions and expectations. A rigorous assessment of these competing interpretations requires reference to economic theories and evidence of user needs beyond what is specifically addressed in the above conceptual framework objectives and concepts. As well, the conceptual frameworks all acknowledge that qualitative characteristics can be in conflict in particular circumstances. For example, what scores high on relevance may score low on reliability. The frameworks comment on the need for trade-offs but provide little indication of how much weight should be given to individual factors[18] or other guidance on making trade-offs.

57. Some may think that framework objectives and supporting concepts are out of date in some significant respects, and should be readdressed. It is, however, beyond the scope of this project to attempt this. Nevertheless, it seems important to assess what seminal developments have taken place since these framework concepts were put in place that may enrich the evaluation of measurement bases in financial accounting within the general context of existing framework foundations.

[18] The Australian and U.S. conceptual frameworks place more emphasis on the relevance and reliability of financial information, relative to understandability and comparability, whereas the IASB, Canadian, New Zealand and U.K. frameworks consider all four characteristics as essentially parallel considerations.

 

## External Changes and Developments

58. The following paragraphs summarize major areas of recent change and development that have significant implications for accounting measurement theory and practice. The changes and developments have tended to apply more directly or more readily to financial assets and liabilities than to non-financial assets and liabilities.

59. Present value theory has been extended and applied more widely in measuring assets and liabilities. CON 7 has made a particularly important contribution in this area, as have studies of some other standard setters (in particular, the ASB 1997 Working Paper, *Discounting in Financial Reporting*). There are now many examples of the application of present value concepts in accounting standards. However, such standards vary in their application of present value concepts (in the basis for the estimation of cash flows and the determination of interest rates). With the exception of CON 7 in the United States and, to a limited extent, the ASB *Statement of Principles for Financial Reporting*, the relationship of present value principles to possible measurement bases has not been addressed in conceptual frameworks.

60. Global capital markets have emerged and contributed to advances in finance theory and practice relating to pricing assets and liabilities, and attendant risks (for example, option pricing and its applications to employee stock options, and the concept of real options). In addition, developments in capital markets have featured the creation of increasingly sophisticated derivatives and other instruments, as well as financing and business arrangements, to isolate and parcel out particular risks. This has forced accounting standard setters to try to adapt or redevelop traditional accounting recognition and measurement approaches, which have proven to be inadequate in dealing with these phenomena. These efforts, in turn, have highlighted the need to understand better and define the logical connections between accounting and the finance and capital market pricing and risk management concepts, and the economic objectives that have led to the creation of these instruments and arrangements.

61. More specifically, extensive work has been undertaken on the fair value measurement of financial instruments, with particular reference to underlying principles and models derived from capital markets and finance theory.[19] There has been a growing body of empirical research into the information value of fair value measurements relative to cost and other measurements.[20]

62. Increasingly, statistical probability theory has been integrated into accounting measurement (for example, in the use of "expected value" probability-weighted estimates in accounting for liability provisions).

63. Advances in computer and information technology have enabled rapid and cost efficient processing of masses of data and complex calculations. These advances have in turn enabled, for example, measurement modeling that could not have been contemplated in practice a few years ago.

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[19] See, for example, FASB, Preliminary Views, *Reporting Financial Instruments and Certain Related Assets and Liabilities at Fair Value,* 1997*;* IASC Steering Committee on Financial Instruments*, Accounting for Financial Assets and Financial Liabilities,* 1997; and Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items,* 2000*;* and sources cited therein.

[20] See American Accounting Association's Financial Accounting Standards Committee, "Response to a Discussion Paper Issued by the IASC/CICA Steering Committee on Financial Instruments, 'Accounting for financial Assets and Financial Liabilities'", *Accounting Horizons, March 1998,* pages 90-97. This paper overviews empirical research and conceptual research on the relevance and information value of fair value measurement of financial instruments, and includes references to specific studies.

64. These developments do not seem to be inconsistent with the above-noted conceptual framework objectives and qualitative characteristics, or the essence of the above-noted definitions of "assets" and "liabilities". Rather, they should help enlighten and focus the application of these basic conceptual framework criteria, summarized at paragraph 54, to the evaluation of alternative measurement bases. In so doing, these broader dimensions in respect of present value, finance, capital markets, and statistical probability may help to overcome the limitations of existing conceptual framework objectives and supporting concepts.

## Summary — Basis for Analysis

65. *This paper evaluates possible measurement bases against the conceptual framework criteria noted in paragraphs 28-54 interpreted in light of the existing knowledge of the areas of development referred to in paragraphs 58-63.*

# PART II: MEASUREMENT ON INITIAL RECOGNITION

## Chapter 3 — Possible Bases for Measurement on Initial Recognition

### Defining Initial Recognition

66. Recognition is defined in the IASB *Framework* as "the process of incorporating in the balance sheet or income statement an item that meets the definition of an element and satisfies the criteria for recognition ..." (paragraph 82). It is beyond the scope of this paper to address the criteria for recognition. Rather, its purpose is to consider the measurement of assets and liabilities when accounting standards determine that they should be initially recognized (see paragraph 13). It is, however, important to set out certain presumptions with respect to what constitutes initial recognition for measurement purposes. In particular, presumptions are necessary with respect to:

(a) the relevant measurement date for assets (liabilities) that are acquired (incurred) on the basis of earlier contracts, and

(b) the distinction of measurement on initial recognition from re-measurement in respect of assets that take time to construct.

67. With respect to (a), entities commonly enter into agreements to purchase assets, or incur liabilities, at some future time. For example, suppose that an entity enters into a contract on January 1 to purchase a truck for 1000 cash, with delivery of the truck and payment of the amount to be made on March 1. Putting aside consideration of whether the contract should be recognized on January 1, it may generally be presumed that the truck will be initially recognized at as an asset by the entity on March 1, and that the asset should be measured as of that date. However, some argue that, although the truck is not recognized as an asset on the balance sheet until March 1, it should be measured as of the earlier contract date. This could result in a different amount if prices change between the two dates, depending on the measurement basis chosen. This argument cannot be fully addressed until basic measurement concepts and alternative measurement bases have been identified and analyzed. The following analyses will presume measurement as of the date that an asset or liability is initially recognized, and the possibility and implications of measurement as of an earlier contract date will be considered at the end of chapter 7.

68. With respect to (b), a question of distinguishing measurement on initial recognition from re-measurement arises when assets are developed over a period of time, that is, require some time and effort to plan, develop, acquire components, construct, install, test, and generally put in a position to contribute to generating future cash flows through sale or use. For the purposes of this paper, "initial recognition" is considered to include this time period.

### Possible Bases of Measurement on Initial Recognition

#### *Identified Alternatives*

69. An extensive body of literature exists on possible asset and liability measurement bases and the underlying objectives of each. Much of this literature was developed twenty-five or more years ago in response to dissatisfaction with conventional historical cost accounting in the face of inflation and widespread price changes. For the most part, this literature predates the developments noted at paragraphs 58-64. While there has been much debate and disagreement

on the merits of different measurement bases, there seems to be general agreement on what the broad alternatives are. This paper proceeds on the basis that, for the purposes of measurement on initial recognition, they are the following:

(a) Historical cost

(b) Current cost

(c) Reproduction cost

(d) Replacement cost

(e) Net realizable value

(f) Value in use

(g) Fair value

(h) Deprival value

70. This list of alternative measurement bases has been developed on the basis of a general knowledge of the above-noted accounting literature, and consideration of the measurement sections of existing conceptual frameworks and various papers and publications indicated by the IASB and participating national standard setters.[21]

### *Present Value*

71. Present value does not appear on this list because it is not a measurement basis in itself. Rather, it is a measurement technique that can be applied to make estimates under several of the above measurement bases. The present value measurement technique is very important because it provides the mathematical structure for valuing expected future cash flows, taking into account the time value of money and attendant risks. Since the cash-equivalent expectations attribute of assets and liabilities is a primary focus of accounting measurement (see paragraph 48), the present value measurement technique provides a framework for evaluating how this attribute may be incorporated within different measurement bases.

### *Possible Combinations of Measurement Bases*

72. Some may believe that different measurement bases are appropriate in different circumstances, or may advocate measurements that mix attributes of two or more of the above bases. The conceptual and practical foundations for these beliefs will be considered as part of the analysis of the alternative measurement bases.

#### *Deprival Value*

73. Some do not consider deprival value to be a separate measurement basis, but rather a decision rule for selecting between three of the above measurement bases (replacement cost, net realizable value, and value in use). However, deprival value is based on an overarching theory of management behaviour that, it may be argued, adds an important dimension that integrates the three bases into a distinct measurement approach. This paper considers deprival value following an examination of the fundamental properties of each of its component measurement bases.

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[21] The IASB and participating national standard setters were each asked to provide papers and references to publications that they believed should be considered in addressing measurement objectives in financial accounting. The sources that were specifically considered are listed in Appendix D, *List of References*.

 

*Other Combinations of Measurement Bases*

74. No other comprehensive measurement frameworks combining two or more of the above alternative measurement bases have been identified.

## Identified Alternatives Defined

75. Although there appears to be general agreement on the broad measurement bases listed in paragraph 69, a review of accounting standards of the IASB and national standard setters and other prominent accounting literature indicates that there are variations in terminology and definitions, and that some of these measurement bases are open to somewhat different interpretations. Inconsistent or loose usage of terms may obscure important issues and differences of view. It is therefore important to agree on common terminology and definitions. A primary objective of this paper is to provide an informed basis for improving and conforming the essential terms and definitions of the IASB and national standard setters.

76. Following are the working terms and definitions adopted for the purposes of this paper for each of the above measurement bases. For the most part, these terms and definitions are based on those currently being used in IASB standards, with the modifications and interpretative comments that are noted and explained below. The modifications are made primarily to improve clarity or to remove redundancies and inconsistencies. Significant identified differences in terms and definitions appearing in the literature of national standard setters have been taken into consideration as discussed below. The following definitions provide the basis for the analysis of the comparative attributes of alternative measurement bases in subsequent sections of this paper.

### *Historical Cost*

77. *Historical cost*: Assets are recorded at the fair value of the consideration given to acquire them at the time of their acquisition. Liabilities are recorded at the fair value of the consideration received in exchange for incurring the obligations at the time they were incurred.

78. This is based on the definition of "historical cost" in the IASB Glossary and the IASB *Framework* at paragraph 100(a), with the following changes:

(a) The IASB definition states: "Assets are recorded at the amount of cash or cash equivalents paid or the fair value of the consideration given ...." It is proposed that the words "cash or cash equivalents paid" are redundant because the amount of cash or cash equivalents paid should always equal the fair value of consideration given.

(b) The IASB definition states: "Liabilities are recorded at the amount of proceeds received in exchange for the obligation." The words "amount of proceeds" are replaced by "fair value of the consideration" in order to be more precise and consistent with the definition of historical cost for assets.

(c) The IASB definition goes on to add: "... or in some circumstances (for example, income taxes), at the amounts of cash or cash equivalents to be paid to satisfy the liability in the normal course of business." This phrase has been omitted from the above definition because it seems to be describing an expected value measurement rather than one that is consistent with the historical cost objective.

79. This definition is similar to definitions currently used by national standard setters. However, some aspects of it appear to be open to different interpretations. For the purposes of this paper, the above definition is adopted on the basis of the following interpretative comments:

(a) *"the fair value of the consideration given"*. Most definitions reviewed contain words to this effect. However, some standard setters' definitions (for example, New Zealand's) indicate that the historical cost of an asset is the accumulation of costs that can be attributed to the asset, which can include allocations of costs (for example, fixed asset overheads) that were incurred some time in the past. A number of accounting standards and practices are consistent with this latter interpretation, which seems difficult to reconcile fully with the view that the historical cost of an asset should be the fair value of the consideration given at the date that the asset was acquired. This, and certain other differences in views as to how the historical cost measurement basis should be interpreted, will be examined in chapter 7.

(b) *"to acquire"*. It is assumed that this should be interpreted to encompass all possible means of asset acquisition, including by cash or cash-equivalent exchange transactions, installation, construction, or development.

(c) *Amortization and impairment adjustments*. The term "historical cost" is assumed to be the amount before any adjustments for impairment or amortization of interest or depreciation. If an asset or liability amount is intended to include such adjustments, its description will be appropriately modified, such as "historical cost less accumulated depreciation".

80. The term "historical cost basis" has sometimes been used to encompass measurement methods that do not meet the definition provided above. For example:

(a) carrying liabilities of uncertain amount (provisions) at the present value of the currently expected amount required to settle the obligation rather than the proceeds originally received (there may be no proceeds received in respect of some provisions); and

(b) writing assets down below cost (or amortized cost) to reflect impairments.

Depending on the nature of the differences from historical cost, the resulting bases are often described in such terms as "modified historical cost", "lower of cost and market", or as a "mixed measurement basis". Various modifications of the historical cost basis will be considered in analyzing the comparative attributes of alternative measurement bases in chapter 7 of this paper.

### *Current Cost - Reproduction Cost and Replacement Cost*

81. *Reproduction cost (of an asset)*: The most economic current cost of replacing an existing asset with an identical one.

*Replacement cost (of an asset)*: The most economic current cost of replacing an existing asset with an asset of equivalent productive capacity or service potential.

82. IASB standards had defined replacement cost as "... the current acquisition cost of a similar asset, new or used, or of an equivalent productive capacity or service potential" (IAS 15.13).[22] This is commonly known as "current cost". *Current cost* is defined for the purposes of this paper

[22] IAS 15 was withdrawn with effect from January 1, 2005, with the result that, as of that date, the term is no longer defined in IASB standards.

 

as the most economic cost of an asset or of its equivalent productive capacity or service potential. This definition embodies reproduction cost and replacement cost, which are usually separately defined in the authoritative literature of other standard setters:

(a) "the current acquisition cost of a similar asset, new or used" is commonly referred to as "reproduction cost", and has been more precisely defined as "the current cost of replacing an existing asset ... with an identical one".[23] The above working definition adds the words "most economic". This is proposed to make it consistent with the accepted definition of "replacement cost", and to distinguish it from the historical cost measurement objective on initial recognition. For reasons discussed in paragraph 321, the fair value of consideration given for an asset (its historical cost) will not necessarily equal the most economic cost to reproduce it on initial recognition.

(b) "the current acquisition cost ... of an equivalent productive capacity or service potential" is usually referred to as "replacement cost". This amount is normally considered to be the lowest or most economic cost at which the equivalent productive capacity or service potential could be obtained on the measurement date.[24]

Some sources refer to "depreciated replacement cost/reproduction cost". This is not considered a separate measurement basis, and the term is not used in this paper. Rather, the concepts of "replacement cost" and "reproduction cost" are presumed to factor in any diminution in amount that would result from wear and tear and obsolescence.

83. The liability equivalent of replacement and reproduction cost is not defined in IASB standards, and the project staff is not aware that it has been defined in the authoritative literature of national standard setters. One author reasons that it is appropriately defined as the "current consideration amount".[25] This may be presumed to be the fair value of the consideration that the owing entity would have received if the liability had been incurred by it on the measurement date. This is the concept that is assumed for the purposes of this paper.

### *Net Realizable Value*

84. *Net realizable value (of an asset)*: The estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

85. This is the definition in the IASB Glossary, from IAS 2.6 and IAS 2.7. It is defined in similar terms by other standard setters and in other authoritative literature. It has sometimes been described as "net selling value" and "net market value". While not explicit in the above definition, it is presumed to be a current value, that is, the value on the measurement date. Again, the equivalent liability definition does not seem to have been formally defined in accounting literature, but it is proposed that it may be defined as the estimated amount that would be incurred in the ordinary course of business to be released from the liability on the measurement date plus the estimated costs necessary to secure that release.

### *Value in Use*

86. *Value in use (of an asset)*: The present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life.

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[23] See *Kohler's Dictionary for Accountants,* 6th edition.

[24] For example, IASB Agenda Paper 3, *Measurement - A Review of Alternatives,* June 2001, authored by Andrew Lennard and Geoffrey Whittington, defines replacement cost as "the most economic cost that an entity would incur in replacing the service potential of an asset at the balance sheet date."

[25] Andrew Lennard, *Liabilities and how to account for them: an exploratory essay,* especially paragraphs 22-32.

87. This is the definition in the IASB Glossary, from IAS 36.5. Other standard setters and accounting literature generally use this term and define it essentially as above. This definition does not state whose expectations should be the basis for determining value in use. Based on its use in standards and practice, it seems generally to be presumed that the objective is to reflect the reporting entity management's best estimates of future cash flows.[26] However, the value in use measurement basis seems often to be interpreted in terms of discounting these management estimates using rates that reflect current market assessments of the time value of money and risks commensurate with those of the asset.[27] This interpretation will be further examined in chapter 7 of this paper. Value in use has been conceived in authoritative literature only in the context of assets. However, some have suggested that the liability equivalent is the present value of estimated cash flows expected by the reporting entity's management to be paid to satisfy a liability. One author has described this as the "cost of performance" measure of a liability.[28]

### *Fair Value*

88. *Fair value*: The amount for which an asset or liability could be exchanged between knowledgeable, willing parties in an arm's length transaction.

89. This is the existing IASB definition that is consistently used in its standards (see the IASB Glossary), with one change. The IASB definition states "or a liability settled", whereas the definition above defines fair value in terms of the amount for which either an asset or a liability could be exchanged. This change avoids the implication that the fair value of a liability is necessarily the amount for which it could be settled, that is, its exit value. In other words, this paper adopts a working definition of the fair value measurement basis expressed in neutral terms as the amount that could be exchanged for an asset or liability, without seeming to be limited to an exit, as opposed to an entry, market price.

90. The above definition is generally consistent with how the term "fair value" has been defined and used in most standard setting jurisdictions:

    (a) It is consistent with the definition in the ASB's FRS 7, *Fair Values in Acquisition Accounting*, as: "the amount at which an asset or liability could be exchanged in an arm's length transaction between informed and willing parties, other than in a forced or liquidation sale." See also the Canadian Accounting Standards Board's definition: "the amount of the consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act."[29]

    (b) The definition of fair value in the *Glossary of Terms* in CON 7 is neutral in allowing for either an exit or entry value interpretation: "Fair value of an asset (or liability): The amount at which that asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale." However, recent FASB deliberations on fair value measurement seem

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[26] This is explicit in the Australian Accounting Standards Board's definition of value in use. See, for example, *Impairment of Assets*, AASB Exposure Draft, Basis for Conclusions, paragraph 19.

[27] See, for example, IAS 36, paragraphs 55-56.

[28] Andrew Lennard, *Liabilities and how to account for them: an exploratory essay,* paragraphs 27 and 32.

[29] See, for example, *CICA Handbook, Financial Instruments — Presentation and Disclosure*, paragraph 3860.05(f).

 

likely to result in defining fair value as an exit measurement objective.[30] The issues relating to defining fair value as a neutral exchange value or an exit value are addressed in chapter 5.

91. The definitions in paragraph 90 go beyond that of the IASB in specifying parties that are "under no compulsion to act" or transactions that are "other than in a forced or liquidation sale". It is presumed for the purposes of this paper that these qualities are embodied in the words of the above IASB-based definition that refer to the amount that could be exchanged between "willing parties in an arm's length transaction", on the presumption that willing parties at arm's length can be under no compulsion to act other than in their own self interest and that an arm's length transaction between willing parties excludes a forced or liquidation sale.

92. There would seem to be acceptance among accounting standard setters that the objective of fair value measurement is to represent the market value of an asset or liability at the measurement date. If there is no observable market price at the measurement date for the asset or liability to be measured, the fair value objective is to estimate what the market price would be if there were a market.[31] This paper accepts that fair value embodies this market value measurement objective. The market value measurement objective, and the attributes of competing market forces that define it, are examined in a later section of this paper (see paragraphs 99-110).

93. It is notable, however, that the definition of "fair value" set out in paragraph 88 makes no mention of the market value measurement objective. It might be contended that this objective is implicit in the definition, reasoning that "knowledgeable, willing parties, in an arm's length transaction" should be expected to arrive at the market price for an asset or liability. However, the terms "knowledgeable", "willing", and "arm's length" are open to interpretations for the purposes of accounting measurement that may not be consistent with the market value measurement objective.[32] Some have suggested that the market value measurement objective should be made explicit in the term used to describe the basis, or in the definition. More specifically:

    (a) Some have suggested that the term "fair value" be replaced by "market value", "market equivalent value", or "fair market value" so as to be more clearly consistent with the market value measurement objective.[33] Discussions with the IASB and national standard setters at an early stage of this project indicated no support for replacing the term "fair value".

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30 The FASB Exposure Draft, *Fair Value Measurement,* proposed this neutral definition: "Fair value is the price at which an asset or liability could be exchanged in a current transaction between knowledgeable, unrelated willing parties" (paragraph 4). However, it is understood that the FASB is now proposing to adopt an exit value definition in its standard on fair value measurement.

31 CON 7 states, for example, that a present value estimate of fair value "should attempt to capture the elements that taken together would comprise a market price if one existed, that is, fair value" (paragraph 25).

32 The International Valuation Standards Committee, an organization comprising professional property valuation associations around the world, describes "fair value" as an accounting term that "... is not necessarily synonymous with Market Value." International Valuation Standards Committee, International Valuation Applications 1, "Valuations for Financial Reporting", paragraph 5.3.3, in *International Valuation Standards,* Seventh Edition, London, 2005.

33 A term often used by valuators (also known as valuers) is "fair market value". *The International Glossary of Business Valuation Terms* defines fair market value as "the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length *in an open and unrestricted market*, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts" (emphasis added). The International Valuation Standards Committee uses the term "market value", defining it as "the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion." International Valuations Standard 1, "Market Value Basis of Valuation", paragraph 3.1, in *International Valuation Standards*, 7th edition.

(b) Some have suggested that the above definition of fair value should be replaced by a definition that explicitly incorporates the market value measurement objective.[34] One possibility is:

> The amount for which an asset or liability could be exchanged in a market in which participants are knowledgeable, willing parties transacting at arm's length.

These suggestions for replacing the term "fair value" and specifically incorporating the market value measurement objective within its definition have not been adopted in this paper. It is presumed that the term and definition set out at paragraph 88 should be interpreted to embody the market value measurement objective.

### *Deprival Value*

94. *Deprival value*: The loss that an entity would suffer if it were deprived of an asset. It is the lower of replacement cost and recoverable amount on the measurement date, with recoverable amount being the higher of value in use and net realizable value.

95. The term is not defined or used in IASB standards. The above definition is essentially that set out and explained in the ASB's *Statement of Principles for Financial Reporting*, chapter 6, and is also known as "value to the business".

96. The ASB's *Statement of Principles for Financial Reporting* also explains that the parallel basis for liabilities is "relief value" (paragraph 6.9). It is proposed that the relief value measurement basis for a liability be defined as the higher of its current consideration amount and repayment amount, with repayment amount being defined as the lower of the current cost of performance and the current cost of release from the liability.[35]

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[34] These include some members of the Canadian Accounting Standards Board, who believe that the term "fair value" is a source of much misunderstanding. See also *Appraisal Institute Response: Fair Value Measurements Exposure Draft*, September 7, 2004, submitted to the FASB, pages 4 and 7-8.

[35] This reflects the conclusions in Andrew Lennard, *Liabilities and how to account for them: an exploratory essay*, paragraphs 32-33, except that the term "repayment amount" is used in the place of "settlement amount" (the term used by Lennard) to avoid potential confusion with differing meanings of the term "settlement" in authoritative accounting literature. The Lennard essay also provides insights into the application of net realizable value, value in use and deprival value concepts to liabilities.

 

# Chapter 4 — General Conceptual Analysis — Market versus Entity-Specific Measurement Objectives

## Approach to Conceptual Analysis

97. The conceptual analysis is set out in the following steps:

(a) Chapters 4 and 5 provide a general conceptual analysis of the proposed underpinnings of measurement objectives that are fundamental to assessing what alterative measurement bases purport to represent and, therefore, to assessing their relevance for measuring assets and liabilities on initial recognition.[36] This paper proposes that there are two fundamental sources of differences between asset and liability measurement bases on initial recognition: (i) market versus entity-specific measurement objectives, and (ii) differences in defining the value-affecting properties of assets and liabilities. These two sources are examined along with their proposed implications for measurement on initial recognition.

(b) Chapter 6 provides a general conceptual analysis of reliability. This involves identifying and addressing the basic factors that limit how well measurements are able to represent what they purport to represent.

Chapter 7 then analyzes each of the identified measurement bases. The general conceptual analysis of chapters 4-6 provides the framework for considering the comparative merits and limitations of each of the identified bases for measuring assets and liabilities on initial recognition.

98. The analysis in chapters 4 and 5 proceeds on the assumption that assets and liabilities are capable of reliable measurement on initial recognition under all identified measurement bases. This simplifying assumption is made to facilitate consideration of the basic economic properties of measurement alternatives without being distracted by reliability issues. Issues relating to the abilities of measurement bases to meet the recognition condition for reliable measurement are addressed in chapter 6.

## Market versus Entity-Specific Measurement Objectives

99. Under the market value measurement objective, an entity looks to market prices of assets and liabilities, which reflect market risk preferences and market expectations with respect to the amounts, timing and uncertainty of future cash flows. An entity-specific measurement objective looks to the expectations and risk preferences of management of the reporting entity. These expectations and risk preferences may differ in some significant respects from those of the market.[37] A measurement may be purely market based or purely entity specific. Alternatively, some aspects of a particular measurement could be founded on entity expectations and other aspects on market expectations (for example, a present value estimate of the value of an asset might reflect entity management's estimates of the timing and amounts of future cash flows discounted at market interest rates). Therefore, it is important to determine whether, or in what respects, a measurement basis is founded on market or entity expectations and risk preferences.

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[36] The term "relevance" is used in the following analysis in a general sense to incorporate the qualitative characteristics of understandability, relevance, and comparability that have been described in paragraphs 35-39 and 45.

[37] CON 7 uses the term "entity-specific measurement", which it explains "... substitutes the entity's assumptions for those that marketplace participants would make" (paragraph 24b).

100. A comparison of entity-specific and market value measurement objectives starts with the fact that individual market participants have their own differing views and expectations about the value of particular assets and liabilities at a given time. Market exchange transactions serve to resolve the different expectations and risk preferences of individual entities into a single price at any point in time. It is important to understand how market processes work to achieve this resolution, because this helps in identifying the essential differences in the properties of market and entity-specific measurement objectives. These properties may then be evaluated against the criteria set out at paragraphs 28-54.

### *Market Value Measurement Objective*

*Market Prices and Efficient Markets*

101. Finance literature refers to the "efficient market price", which is usually defined as the price that fully and without bias impounds all publicly available information. In an efficient market, competitive participants will drive the market price of an asset to an equilibrium price that reflects the expectation that the asset will earn the current available market rate of return for equivalent risk. In other words, a buyer in an efficient market can expect to earn the current market rate of return relative to the market's assessment of the future cash flows and the risk taken, no more and no less.[38] All assets and liabilities traded in efficient markets will have their market prices determined on the basis of this expectation, because any expectation of a different return will be quickly arbitraged away. Suppose, for example, that publicly available information indicates that a traded security is under priced, that is, that it will earn a return that is superior to the current rate of return available in the marketplace for equivalent risk. It can be expected that buyers will immediately enter the market to acquire that security, thus bidding up the price until it reaches the equilibrium price at which it is expected to yield the current market risk-adjusted rate of return.

102. In an efficient market the diverse expectations and risk preferences of potential buyer and seller interests are resolved into a single market equilibrium price. This equilibrium price will reflect the market's expectation of the highest and best use of an asset, in the sense that:

(a) parties who have higher private expectations of the value of the asset (that is, believe that it is under priced) will have acquired it, and may have entered into contractual commitments or options that will increase in value if the asset market price increases; and

(b) parties who have lower private expectations (that is, believe that it is overpriced) will have disposed of the asset, and may have entered into contractual commitments or options that will increase in value if the asset market price declines.

103. Of course, as events unfold and new information becomes available, participants' positions and expectations will change, so that efficient market prices will be constantly adjusting towards new equilibriums. In an efficient market, an item's equilibrium price will reflect market participants' collective assessment of all information available in the marketplace at the time.

104. In efficient markets, capital is fungible and moves between investment opportunities, so that prices of all market-traded assets and liabilities reflect the same expected return for equivalent risk at any given date. Again, any imbalances in market return expectations as between different investments will be quickly arbitraged away.

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[38] See, for example, Stephen H. Penman, *Financial Statement Analysis and Security Valuation*, pages 70-71, for a brief description of this efficient markets process.

 

105. However, there are many cases in which assets and liabilities do not have observable market prices in efficient markets, and not many markets are fully efficient. There is also substantial evidence of "price bubbles" in which, in retrospect at least, it seems that even well-regulated, open and active markets were deceived or did not fully impound available information. Many asset and liability exchanges take place in markets that are subject to some imperfections.

106. Some question the relevance of market prices for accounting purposes, given their vulnerability to market imperfections and possible irrational behavior, particularly when speculations lead to "price bubbles". Some have advocated allowing adjustments to try to reduce reported volatility and overstated, speculative market values. Such adjustments must necessarily involve:

(a) taking a different view from that of the market, or

(b) instituting some arbitrary adjustment process, such as some averaging of market values over some time period.

The former involves substituting an entity-specific measurement, and is therefore to be evaluated in considering entity-specific alternatives to market value. With respect to (b), any adjustment process, such as averaging, must necessarily be arbitrary and subjective. It results in second guessing the market by substituting the results of the adjustment process for the judgment of the marketplace. Some have contended that market prices tend to follow cyclical patterns, but empirical evidence has generally supported the premise underlying markets theory that market prices tend to follow a "random walk", that is, that prices tend to move in an unbiased manner in response to new information.

*Essential Properties of Market Value*

107. Based on the above analysis, this paper proposes that the market value measurement objective is to reflect the price for an asset or liability that would result from a competitive market process. It is proposed, for the purposes of defining this objective, that "market" be defined as follows:

> *A body of knowledgeable, willing, arm's length parties carrying out sufficiently extensive exchange transactions in an asset or liability to achieve its equilibrium price, reflecting the market expectation of earning or paying the market rate of return for commensurate risk on the measurement date.*

This is the price that would "clear the market", that is, the price that would equate supply and demand for the asset or liability on the measurement date, assuming a body of knowledgeable, willing, arm's length buyers and sellers.

108. The proposed market value measurement objective has as its starting point a conventional dictionary definition of "market". *Webster's Encyclopedic Unabridged Dictionary of the English Language* (1989) includes this definition "... a body of persons carrying on extensive transactions in a particular commodity."[39] This basic definition is expanded above to incorporate the above market price equilibrium condition and the accepted qualities of "fair value" (that is, the involvement of knowledgeable, willing, arm's length parties).

109. The meaning to be ascribed to the word "knowledgeable" in the definition proposed above is central to understanding the market value measurement objective. It is proposed that the objective should be to reflect the price that would result in a market of willing arm's length parties who have access to publicly available information and expertise. Some may question

[39] This is one of a number of definitions of "market". The above definition focuses on what constitutes a market, which is to be distinguished from other common uses of the word, for example, to market (attempt to sell) a good or service.

whether "knowledgeable" should be defined in terms of private information as well as publicly available information, which has implications for the treatment of information asymmetry. Information asymmetry exists when some market participants have, or are thought by others to have, information on the value of an asset or liability that is not available to other participants. The concept of "knowledgeable" and issues relating to information asymmetry are further addressed in later sections of this paper (see, in particular, paragraphs 183-187 and 240 and 241).

110. There may also be questions as to what meaning to ascribe to the term "willing arm's length parties" in defining the market value measurement objective. It is proposed that the term presumes that the abilities and motivations of participants are determined by competitive market conditions and their individual profit-maximization goals, risk preferences, and expectations. The market value objective presumes that participants are not under any compulsion to transact with other parties at disadvantaged prices as a result, for example, of being under the control of another party, or being subject to insolvency conditions.

*Fair Value in Relation to Market Value*

111. The objective of fair value, as defined earlier in this paper (see paragraph 92), is to represent the market value of an asset or liability on a measurement date. If there is no observable market price, the objective of fair value is to estimate what the market price would be if a market for that asset or liability existed on the measurement date. This objective requires careful interpretation in respect of an asset or liability for which there is no observable market, as defined above. This paper proposes that the fair value measurement objective in this case should be to estimate the exchange price that would result from a body of knowledgeable, willing, arm's length parties carrying out sufficiently extensive exchange transactions to achieve the equilibrium value for the asset or liability, given its liquidity limitations. Potential limitations in reliably estimating fair value, that is, in faithfully representing the fair (market) value of assets and liabilities on initial recognition, are examined in chapter 7.

### *Entity-Specific Measurement Objectives*

112. An entity-specific measurement of an asset or liability may differ from its market value because of different expectations as to amounts or timing of future cash flows, different risk assessments or preferences, or different discount rates. Any measurement of an asset or liability that differs from its market value must be based, explicitly or implicitly, on entity-specific expectations or risk preferences that differ from those of the market. To illustrate:

(a) Suppose that an entity recognizes a liability for warranties on the products it sells. An entity-specific measure of the liability would differ from its market value if management of the entity expects to service the warranties obligation at a lower, or higher, cost than is implicit in the market price.

(b) Suppose that an entity recognizes an asset (for example, plant or equipment) at a cost-based amount that is more or less than its market value on the date of initial recognition. Perhaps the entity constructed the asset itself at a cost that is more or less than the amount for which it could have purchased the asset in the marketplace. In this case, the entity must be presuming recoverability from the asset's future cash-generating activities that differs from the highest and best use expectation implicit in the market price. For example, if the recognized amount exceeds market value, then the entity may be expecting that it can achieve higher cash inflows than the market expects, or perhaps it is content to earn a rate of return that is less than the market rate of return for equivalent risk.

 

113. CON 7 observes that an entity-specific alternative to a market-based measurement:

> "... (a) adds factors that are not contemplated in the price of a market transaction for the asset or liability in question, (b) inserts assumptions made by the entity's management in the place of those that the market would make, and/or (c) excludes factors that would be contemplated in the price of a market transaction. Stated differently, each alternative either adds characteristics to the asset or liability for which marketplace participants will not pay or excludes characteristics for which marketplace participants demand and receive payment." (paragraph 31)

114. There are a number of reasons why the cash flows that an entity expects to receive from a particular asset, or to pay on a particular liability, may differ from the amounts implicit in the market price of the asset or liability. These include:[40]

(a) The entity's management might intend a different use of an asset, or a different settlement of a liability, than the highest and best use implicit in the market price. As an example, an entity's management might intend to operate a property as a bowling alley (and base its value on initial recognition on the present value of cash flows that it believes will be generated from that business), while the marketplace may consider its highest and best use to be a parking lot. Management's different intentions may be based, for example, on its belief that it has inside information or expertise that is superior to that of other market participants.

(b) The entity's management might intend to manage a liability, such as a product warranty, internally in the expectation that it will do so more efficiently than is implicit in the market price.

(c) The entity might hold information, trade secrets, or processes that its management expects will enable it to realize, or pay, cash flows that differ from those expected by others in the marketplace.

(d) The entity might expect to be able to realize or pay amounts through the use of internal resources. For example, an entity that manufactures materials that it uses in particular processes may be able to manufacture those materials at a cost lower than the market price charged to others. An entity that chooses to satisfy a liability with internal resources may avoid the markup or anticipated profit charged by outside contractors.

115. Each of the items listed in the preceding paragraph represents an advantage or disadvantage that an entity perceives that it has relative to others in the marketplace. Certainly, many entities will have some advantages and disadvantages relative to others in the marketplace. Only time will tell whether an entity's expectations regarding future cash flows will be realized, including those attributable to any additional, unrecognized intangible assets. The question is whether, and if so when, an entity's expected advantages or disadvantages relative to market values should be recognized and measured. In particular, should asset and liability measurement on initial recognition reflect an entity's expected advantages or disadvantages that are not factored into market prices, or should measurement reflect the market's expectations?

116. When an entity measures an asset or liability on initial recognition at its market value, any entity-specific advantage or disadvantage relative to the market value will be reported in net income as value added or lost in subsequent periods when it is recognized in the marketplace. Marketplace recognition will be reflected in subsequent periods as realized gains or losses, or as unrealized gains or losses if the market value of the asset or liability subsequently changes

[40] The following discussion is based on that in CON 7, paragraphs 32 and 33.

to recognize the advantage or disadvantage and the asset or liability is re-measured at that value. In contrast, when an entity measures an asset or liability on initial recognition using an entity-specific measurement, the entity's anticipated advantages or disadvantages are embedded in the initial measurement of the asset or liability. In that case, the net income reported in subsequent periods will be affected only to the extent that amounts realized or settled on the asset or liability prove to be different from its entity-specific value.[41]

*Management's Intentions*

117. Some believe that the measurement of assets or liabilities on initial recognition should be consistent with management's intentions for the use or realization of an asset, or with respect to how a liability will be settled. Management's intentions can lead to expectations that differ from those implicit in the market value of the asset or liability. For example, measurement of a building on initial recognition at an amount in excess of its market value could result when management intends to use the building for a purpose that it believes will yield superior cash inflows, without a commensurate increase in risk, to those presumed in the expectation of highest and best use implicit in the market value.

118. Some believe that measurements reflecting management's intentions are more useful to investors and creditors than market values. Arguments made in support of this belief include:

(a) Management knows more about its business than does the market generally. An entity-specific measurement of assets and liabilities indicates what management expects the present value of the entity's future cash flows to be, which some users of financial statements believe is more helpful than market expectations in constructing a valuation of that entity.

(b) Management would be held accountable relative to its own plans and expectations, with the result that differences from its expectations will be reflected in reported net income of periods subsequent to the initial measurement of the assets and liabilities.

119. Others believe that accounting measurements based on management's intentions are not as useful as market values to investors and creditors. Arguments in support of this belief include:

(a) The market value of an asset or liability impartially reflects the collective knowledge and expectations of all market participants, rather than the knowledge, intent and expectations of the reporting entity. The strength of the market value measurement objective is that it represents the results of an open and active competitive market process involving knowledgeable and willing arm's length participants on the basis of all publicly available information.

(b) Managements would be held accountable relative to impartial market values for assets and liabilities that are comparable between entities and over time. In other words, similar assets or liabilities will have similar market values on a measurement date. In contrast, measurements of similar assets or liabilities based on management's intentions may be significantly dissimilar, reflecting differences in intentions and expectations. Such measurements may change with changes in management's intentions even though no external economic event has occurred. It can be very

[41] Both market-based and entity-specific measurement objectives could result in recognizing gains and losses on initial recognition of an asset or liability. In other words, neither objective rules out the possibility of an entity acquiring an asset or incurring a liability for consideration that is more or less than the measurement of the asset or liability on initial recognition. However, the circumstances in which gains and losses arise on initial recognition, and their amounts, could differ significantly as between market and entity-specific measurements.

difficult or impossible for external users of financial statements to identify and evaluate the effects of these differences on a measurement date in order to make valid comparisons between entities and over time.

120. The exclusion of management's intentions from accounting measurement under the market value measurement objective should not be construed to be questioning managements' rationality or good faith in exercising its discretion and judgment in making entity-specific measurements. Supporters of entity-specific measurement objectives believe that rational management behavioural presumptions can provide an adequate basis for ensuring that individual entity intentions and expectations are within rationally justifiable bounds in relation to current economic conditions and resources. This is, in part, a question of the reliability for external financial reporting purposes of measurement bases that rely on rational management expectations, a question that is considered in assessing these bases in chapter 7. Putting reliability considerations aside, the essential question in this section is whether an entity-specific measurement objective, which reflects management's intentions, could have superior relevance to the market value measurement objective in measuring assets and liabilities on initial recognition for external financial reporting purposes.

121. In considering what role management's intentions should play in accounting measurement, it may be instructive to consider the extent to which it has been accepted or rejected in other aspects of accounting, and any bases provided for this acceptance or rejection. The frameworks of the IASB and some national standard setters do make some references to intentions and expectations. However, the frameworks either do not specify whose intentions or expectations should be applied, or they discuss intentions and expectations in a context that does not provide direction on their role in accounting measurement. Some accounting standards either require or permit entities to measure assets and liabilities on the basis of management's intentions or expectations, while others require or permit a market-based measurement.[42] There seems to be no reasoned conceptual basis justifying the apparently conflicting positions taken in these standards.[43]

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[42] Examples within the body of IASB standards include the requirement in IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* for an entity to determine a provision based on its best estimate of the expected future cash flows required to settle the obligation, and the requirement in IAS 39 *Financial Instruments: Recognition and Measurement* for an entity to measure certain financial assets and liabilities at fair value (and the option to measure others at fair value). There are other examples of both approaches in the standards of the IASB and national standard setters.

[43] One prominent and controversial issue relating to fair value versus measures reflecting management's intentions on initial recognition of assets and liabilities is hedge accounting. See, in particular, the discussion of this issue in Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions - Financial Instruments and Similar Items,* paragraphs 7.1-7.22.

### *Comparing Market and Entity-Specific Measurement Objectives*

122. The following table provides summary observations concerning the application of the criteria, other than reliability, set out in paragraphs 28-54 to market and entity-specific measurement objectives for assets and liabilities on initial recognition. These observations are intended to be descriptive rather than evaluative; a preliminary evaluation is presented in paragraphs 123-130. It is emphasized that consideration of the general implications of reliability criteria in paragraphs 40-44 is not reflected in the observations below but is addressed separately in chapter 6.

| Criteria | Market objectives | Entity-specific objectives |
|---|---|---|
| Stewardship (paragraphs 31-33) | Entity management is accountable against the market value of an asset or liability on initial recognition. Gains or losses will be recognized to the extent that the market value of an asset (liability) on initial recognition differs from the amount that has been paid to acquire it (received on incurring it). The effects of any entity-specific advantages or disadvantages will appear as a gain or loss only when they are realized or reflected in market value. | Entity management is accountable against its own expectations, assumptions, and intentions as they are reflected in the measurement of assets and liabilities on initial recognition. An entity's perceived advantages or disadvantages relative to the market will be reflected in that measurement. |
| Understandability (paragraph 35) | Efficient markets concepts and related capital markets finance literature provide the framework for understanding the economic properties of the market value measurement objective. | The understandability of entity-specific measurements depends on the adequacy of information provided about management's intentions, assumptions, and expectations, and on how measurements are derived from them. |
| Relevance (paragraph 36) | The ability to influence rational economic decisions is based on the decision usefulness qualities noted below (predictive value and feedback value), which in turn are founded on the presumption that a market value has economic substance because it reflects the results of open market forces involving knowledgeable and willing arm's length participants who have access to all publicly available information at the measurement date. | The ability to influence rational economic decisions is based on the decision usefulness qualities noted below (predictive value and feedback value), which in turn are founded on the presumption that an entity-specific value impounds information known to management at the measurement date, including management's perception of advantages or disadvantages accruing to the entity that may not be known publicly. |
| | | *continued...* |

 

*Continued from previous page*

| Criteria | Market objectives | Entity-specific objectives |
|---|---|---|
| Predictive value (paragraphs 37-38) | Predictive value is founded on expectations of the rate of return available in the marketplace for commensurate risk on the measurement date, subject to the volatility arising from the risks inherent in the asset or liability. | Predictive value is premised on the expectations and assumptions of management of the reporting entity on the measurement date, and thus will depend on such factors as individual entity knowledge bases, risk tolerances, management optimism or pessimism and, possibly, on incentives for biasing such expectations and assumptions. |
| Feedback value (paragraph 39) | Feedback value results from the comparison of previously expected market rates of return with either actual market outcomes or revised market expectations. | Feedback value results from the comparison of management's previous expectations about the returns on an asset or liability with either actual market outcomes or revised management expectations. |
| Comparability (paragraph 45) | 1. Measurements consistently represent the same economic property, i.e., the market's equilibrium price reflecting the market's expectations of future cash flows discounted at the risk-adjusted rate of return available on the measurement date.<br>2. Measurements are unaffected by how an asset or liability is acquired or incurred. | Comparability is difficult because measurements are based on individual entity expectations, assumptions, and intentions that are variable over time and between entities, as noted under "predictive value" above. |
| Concepts of "assets" and "liabilities", and their embodiment of the cash-equivalent expectations attribute (paragraphs 46-49) | Market value measurement of assets and liabilities is consistent with defined framework concepts, on the basis that it reflects the market's evaluation of the amounts, timing, and uncertainty of cash equivalent flows as embodied in the market's measure of the present value of expected cash flows discounted for time and risk at the measurement date. | Entity-specific measurement of assets and liabilities is consistent with defined framework concepts, on the basis that it reflects management's cash flow expectations, which are subject to the considerations noted under "predictive value" above. |
| Capital maintenance (paragraphs 50-51 | Capital maintenance properties are based on measuring capital (assets less liabilities) on initial recognition at an amount that will maintain capital's ability to earn the current market rate of return for commensurate risk. | Capital maintenance properties depend on the particular entity-specific basis selected for measuring the capital of an entity (that is, its assets and liabilities) and on management's expectations, assumptions, and intentions used in applying that basis. |
| Cost/benefit constraints (paragraphs 52-53) | Not subject to informed analysis without consideration of specific circumstances. | Not subject to informed analysis without consideration of specific circumstances. |

### *A Preliminary Evaluation*

123. It may be reasoned that both market and entity-specific measurement objectives can provide useful information for investors and other users to make economic decisions. In particular:

(a) A financial statement user's ability to predict the ability of an entity to generate cash flows may be enhanced by having both the entity management's and the market's valuation of an asset or liability.

(b) A financial statement user's ability to assess the stewardship of management for the resources entrusted to it may be improved by having information and underlying measurements of assets and liabilities on initial recognition that reflect both management and market expectations. A user may then be able to evaluate management both against its own expectations and those of the market.

124. However, when the entity and market expectations for an asset or liability differ, it is not possible to have the benefits of both in a single measurement. This would appear to leave two possibilities:

(a) One measurement objective or the other is more relevant for all assets and liabilities on initial recognition in all circumstances.

(b) Each measurement objective is relevant on initial recognition in different circumstances or for different types of assets or liabilities.

125. Possibility (b) would require a sound basis for distinguishing when one objective or the other is more relevant on initial recognition. Analysis to this point does not suggest any basis for making this distinction. However, the possibility should not be lost sight of, and should be kept in mind in analyzing the identified alternative measurement bases in chapter 7.[44] In principle, possibility (b) seems likely to warrant serious consideration only if it cannot be concluded that one or other of these two broad measurement objectives is conceptually superior for all assets and liabilities in all circumstances.

126. With respect to possibility (a), the choice between the market and entity-specific measurement objectives on initial recognition may be put in the form of the following question:

> Assuming that each objective can be measured with acceptable reliability on initial recognition of an asset or liability, should a rational investor or other financial statement user be expected to prefer measurement on the basis of the market objective or the entity-specific objective?

127. The foregoing analysis indicates that the distinction between market and entity-specific objectives is not just important, but fundamental to measurement of assets and liabilities on initial recognition. A clear choice needs to be made between these two objectives.

128. *This paper proposes, on the basis of the above conceptual analysis, that the market value measurement objective has important qualities that make it superior to an entity-specific measurement, at least on initial recognition. Primary among these qualities is that competitive market forces work to resolve diverse expectations of various entities' managements to a single price that impartially reflects all publicly available information on any given measurement date. As a result, market values of assets and liabilities reflect the present value of future expected cash flows to yield the current market rate of return for commensurate risk. This gives measurements a quality of comparability over time and as between entities. An entity-specific measurement does not reflect the effects of market forces, but rather is subject to the vagaries of individual entity expectations, intentions, and assumptions. This is not to deny that there are market vagaries or that a particular entity's expectations may prove to be more correct than*

[44] For example, some have advocated that the historical cost basis is appropriate for assets that are inputs to productive cash-generating processes, while fair value is appropriate for financial assets.

 

*those of the market. The question comes down to whether it is more relevant to financial statement users for assets and liabilities to be measured on initial recognition on the basis of entity intentions and expectations or on the basis of market values. This paper proposes that the analysis to this point indicates that the more relevant financial statement measurement objective on initial recognition for investors and other external users is that entities be measured against market values and subject to the discipline of the marketplace, rather than to entities' individual expectations.*

129. It is emphasized that this proposition is subject to re-evaluation based on further analysis of specific measurement bases in chapter 7, and applies only to measurement on initial recognition. Also, the tentative working conclusion is not intended to deny that there may be significant additional information value to investors and other external users of financial statements in knowing the intentions, expectations, and assumptions of the management of an entity when they differ from those implicit in market value on initial recognition. However, the above analysis suggests that such entity-specific information is more appropriately the subject of forecasts or supplementary disclosures, rather than being the basis for measuring assets and liabilities on initial recognition for external financial reporting purposes.

130. Some might be tempted to conclude that this tentative working conclusion should be equally valid for re-measurements of assets and liabilities, because the fundamental conceptual analysis above may seem to be applicable to both. However, re-measurement of assets and liabilities in periods subsequent to their initial recognition requires consideration of a different measurement context that will require analysis of additional issues before conclusions with respect to re-measurement could be advanced.

## Chapter 5 — General Conceptual Analysis — Value-Affecting Properties and Market Sources

131. Traditionally, measurement bases have been classified and evaluated in terms of whether they are "entry" or "exit" values. An *entry value* is a measure of the amount for which an asset could be bought or a liability could be incurred. An *exit value* is a measure of the amount for which an asset could be realized or a liability could be settled.[45]

132. A large body of accounting literature has been concerned with the comparative merits and drawbacks of various entry and exit value models. In particular, much has been written on competing theories for the valuation of assets and liabilities involving:

(a) comprehensive current entry value models, for example, as advocated by Edwards and Bell;[46] and

(b) comprehensive current exit value models, for example, models advocated by Chambers[47] and Sterling.[48]

133. The accepted concepts of "assets" and "liabilities" may seem to have an exit value orientation because they are defined in terms of future economic benefits, ultimately cash or cash equivalents, to flow to an entity (assets) or to flow from an entity (liabilities).[49] It has been reasoned earlier (see paragraph 48) that the cash-equivalent expectation attribute of assets and liabilities should be the focus of accounting measurement. However, some contend that entry values capture this attribute better than exit values, in at least some significant situations.[50]

134. The analysis of the market value measurement objective in the previous chapter puts the traditional entry-exit value debate into a different perspective. Specifically, the market value measurement objective does not envisage that there could be different entry and exit market (fair) values for the same asset or liability at the same time. The definition of "fair value" set out at paragraph 88, reasoned from the market value objective, is "*the amount* for which an asset or liability could be exchanged between knowledgeable, willing parties in an arm's length transaction" (emphasis added). The market value of an asset or liability establishes the entry value to the buyer and the exit value to the seller in that market.[51] It seems fundamentally inconsistent with the premises of open competitive markets to expect that identical items could be bought and sold in different markets at different prices at the same time. Knowledgeable and willing buyers and sellers at arm's length should be expected to arbitrage away such differences quickly.

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45 The proposed definitions of these terms are intended to be consistent with general use in accounting literature. See, for example, definitions in *Kohler's Dictionary for Accountants*, 6th edition. However, the terms seem not to be defined in existing standards of the IASB or national standard setters.

46 E. O. Edwards and P. W. Bell, *The Theory and Measurement of Business Income.*

47 R. J. Chambers, *Accounting, Evaluation and Economic Behaviour,* and *Accounting for Inflation: Methods and Problems.*

48 R. R. Sterling, *Theory of the Measurement of Enterprise Income.*

49 See, for example, the IASB definitions of these terms in IASB *Framework*, paragraph 49.

50 See, for example, Philip W. Bell, *CVA, CCA and CoCoA: How Fundamental are the Differences?*

51 This ignores transaction costs which, it will be reasoned, should be excluded from market value. The basis for this conclusion and questions relating to the treatment of transaction costs are addressed at paragraphs 193-200.

 

135. *Thus, the* a priori *expectation reasoned from the market value measurement objective is that there can be only one market (fair) value for an asset or liability on any measurement date.*[52] It is proposed that differences between apparent market values of seemingly identical assets or liabilities, for example between their exit and entry values, may be attributable to one or both of the following sources:

    (a) Differences between the assets and liabilities traded in different markets. Apparently different entry and exit prices for an asset or liability may be due to, sometimes subtle, differences between the asset or liability that is traded in an "entry" market and the asset or liability that is traded in an "exit" market.

    (b) Entity-specific charges or credits. Some differences between exit and entry values of assets and liabilities are due to entity-specific charges or credits. Under the market value measurement objective, these would be treated as expenses or income (or perhaps, in some cases, as direct charges or credits to equity) on recognition. Under an entity-specific measurement objective, they might qualify for inclusion in the measurement of the asset or liability depending on management's expectations, intentions, and assumptions. Transaction costs represent a particular case in point requiring consideration (see consideration of related issues at paragraphs 193-200).

136. However, it may be doubted that these two sources explain all differences between entry and exit values of assets and liabilities. The FASB's research and experience on fair value measurement have led it to conclude that multiple markets with different prices do exist for some assets and liabilities after adjusting for value-affecting differences and entity-specific effects. It may be suggested, then, that certain market inefficiencies can result in different market prices for identical assets and liabilities on a measurement date.

137. A thorough examination of the proposition set out in paragraph 135, and the apparently conflicting evidence of the existence of multiple markets, requires research into the nature and causes of different prices in different markets for apparently similar assets and liabilities. It is suggested that the basis for such research lies in addressing the following questions:

    (a) What are the essential properties of an asset or liability that will affect its measurement on initial recognition, including what should be the unit of account?

    (b) What market (or markets) may exist for assets and liabilities with similar properties to those of an asset or liability to be measured and, if there is more than one market, what may explain any differences in their prices?

    (c) What is the nature of costs that are incurred to carry out transactions? Are they entity-specific costs that can be distinguished from the components of fair value?

138. It will be seen that these questions, and the issues they expose, are important in their own right in assessing the market value measurement objective, and in relating this objective to alternative entity-specific objectives.

[52] This is not to say that there may not be a range of measurement uncertainty in estimating the fair value of a particular asset or liability. However, that is a different issue relating to reliability, which is the subject of general consideration in chapter 6, and specific consideration in relation to fair value in chapter 7.

## Defining the Asset or Liability to be Measured on Initial Recognition

### *Value-Affecting Properties*

139. The first step in measuring the market or entity-specific value of an asset or liability is to identify precisely the value-affecting properties of that asset or liability on the measurement date. Assets and liabilities may be classified into two general groups:

(a) contractual rights or obligations, which are broadly defined for the purpose of this paper to include written or oral agreements, contracts implied by an entity's actions or by custom or practice, and rights or obligations that are granted or imposed by law;[53] and

(b) non-contractual assets (tangible and intangible assets whose value lies in their use or sale).

The value-affecting properties of a contractual asset or liability ultimately flow from the contract, which provides the basis for deriving expected cash flows and defining and pricing the risks to which the asset or liability is exposed. The value-affecting properties of a non-contractual asset (which could be a tangible asset such as plant and equipment, or an intangible asset such as a patent) include, where relevant, its tangible or intangible characteristics (including its capacity), the nature of the ownership rights, and its location and condition on the measurement date.[54]

140. Some insights into properties affecting fair value and their value implications may be drawn from finance theory and market pricing practices (for example, from factors and assumptions used in present value and option pricing models),[55] and the theories and techniques of actuaries and professional valuators. The finance and market pricing literature relates most directly to financial instruments. In-depth study of the value-affecting properties of assets and liabilities is beyond the preliminary investigation scope of this paper.

141. Entity-specific interpretations of the value-affecting properties of an asset or liability may differ from those of the marketplace, since management's risk preferences, intentions, assumptions, and expectations may differ from those implicit in market prices. As an example, an entity may have a different view from other market participants of the condition of a tangible asset and, as a consequence, might have a higher or lower expectation of its value.

#### *Liabilities — Special Considerations*

142. Some believe that liabilities have certain unique properties that differ from their asset counterparts. They contend that these unique properties have important measurement implications, so that a particular promise to pay could have a different value as a liability of the promisor than it has as an asset of the promisee on the measurement date.

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[53] Contractual rights and obligations are envisaged for the purposes of this paper to be essentially the same as requirements to receive or pay amounts under government legislation or common law as interpreted by the courts, such as, for example, laws imposing an obligation to restore environmental damage. They are also envisaged to include "constructive obligations" as defined in IAS 37, paragraph 10. On the basis of this broad interpretation, it is proposed that for the purposes of this paper all liabilities should be treated as if they are contractual in nature.

[54] For a description of property ownership rights and "specific characteristics of properties and transactions that may explain price variations", see International Valuation Standards Committee, Guidance Note 1, "Real Property Valuation", paragraphs 1.8, 3.7, and 5.22, in *International Valuation Standards.*

[55] Some logical applications of this theory and practices can be seen in, for example, CON 7; the Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items*, especially paragraphs 346-354; and in recent deliberations of the IASB and FASB on the valuation of employee stock options.

 

143. This contention is not consistent with the concept of fair value as it has been proposed in this paper. Reasoning within the market value measurement objective, the fair value of a promise to pay is its exchange price in the marketplace. This exchange price is the same for buyer and seller participants. It is the price that would be paid by a buyer of the promise to pay (the promisee) and received by a seller/issuer of that promise to pay (the promisor). Consequently, the fair value of a promise to pay on a measurement date is the same amount for both the entity that has bought it and holds it as an asset and the entity that has issued it and for whom it is a liability. The question is whether there are some factors relating to liabilities that give cause to rethink this expectation.

144. A particular question relates to the treatment of credit risk in measuring liabilities. This has been a controversial issue. The market exchange price for a promise to pay will, of course, factor in the market's evaluation of the issuer's ability to pay and any collateral or other security provided. Thus, an unsecured promise to pay by an issuer with low credit standing in the marketplace will have a lower fair value on a measurement date than an identical promise to pay by an issuer with a high credit standing. Some believe that liability measurements should exclude credit risk. They believe that the measurement objective for liabilities should be fundamentally different from that for assets. More specifically, they argue that it is not reasonable for an entity to measure its liabilities on the expectation that there is some risk that it will not meet its obligations. Rather, they contend, liabilities should be measured on the basis of management's intention to repay its liabilities in full, and management should be accountable for managing the entity with this intention and expectation.

145. This argument reflects a particular assumption as to management intention that is inconsistent with rational market expectations. Supporters of this argument must address the fact that an issuer of an unsecured promise to pay in exchange for cash in the marketplace will receive its fair value, which will reflect the market's evaluation of the credit risk associated with the promise to pay. They would, therefore, have to restate this fair value to remove the effect of the credit risk discount on initial recognition. Presumably, this adjustment would have to be treated as a charge to net income.[56] In fact, few argue for making this adjustment on initial recognition in respect of liabilities that are exchanged for cash, and existing standards and practice would not permit it. The argument for excluding credit risk from the measurement of liabilities on initial recognition has most commonly been made in respect of liabilities that are of the nature of provisions (such as insurance, warranty, and defined benefit pension obligations), and such liabilities have often been measured without recognizing this risk. There would seem to be no convincing conceptual arguments supporting inclusion of credit risk on initial recognition in the measurement of debt but not in the measurement of liabilities that take the form of provisions.

146. The primary concern has been with respect to the effects of changes in credit risk in re-measuring liabilities subsequent to initial recognition. Some question the relevance of including in net income or directly in equity the effects of changes in credit risk in any re-measurements of its liabilities. Re-measurement issues are beyond the scope of this paper.

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[56] Some would recognize this amount as a separate asset on initial recognition. They reason that this asset represents the value on initial recognition of an implicit "default option" on the part of the debtor to put its assets to the creditors instead of repaying the liability in accordance with its contractual terms. In essence, this is a difference in the units of account, which would result in a balance sheet reclassification of the credit risk component of a liability to be separately accounted for as an asset. This reclassification would have no effect on net income or equity on initial recognition.

147. In summary, this paper proposes that a promise to pay has the same fair value on initial recognition whether it is an asset or a liability. The credit risk associated with a promise to pay is taken into account in the market's determination of the fair value of that promise to pay as an asset or a liability.

### *The Unit of Account*

148. A vital pre-condition for determining the value-affecting properties of assets or liabilities is to define their units of account. Whether an asset or liability is defined as its lowest identifiable unit or on the basis of some grouping or aggregation with other assets or liabilities may alter valueHaffecting properties and, consequently, affect the measure of fair value or entity-specific value. Two types of unit of account issues relate to (i) portfolio creation and (ii) aggregation.

#### *Portfolio Creation*

149. For the purposes of this paper, a portfolio is considered to be a group of similar assets or liabilities in which the assets or liabilities retain their individual identities. An example is a portfolio of loans. The question is whether a loan portfolio has a fair value that differs from the sum of the fair values of the individual loans making up that portfolio.

150. There is no doubt that the creation of a portfolio can reduce risk through diversification. Suppose, for example, that an entity can choose between investing a sum of money in a single loan with a 0.05 probability of a default that would reduce its fair value to zero, or in a diversified portfolio of loans each with a 0.05 probability of default. Investment in the single loan exposes the entity to a 0.05 probability of losing its entire investment, while there is presumably much less risk of losing significantly more (or less) than five percent of the value of a diversified portfolio of similar loans. Intuitively, it might be expected that knowledgeable market participants would be prepared to pay a smaller amount for the single loan than for the diversified portfolio. However, accepted finance theory holds that the price for an individual asset or liability in an efficient market will not reflect any effect for risks that can be diversified away. It is reasoned that market prices do not recognize risks that market participants could reduce themselves through portfolio diversification. This seems to suggest that the fair value of a portfolio of loans should be expected to equal the sum of the fair values of the individual loans in that portfolio. But this may be an oversimplification. For example, a premium might be paid in the marketplace for the value of the effort and expertise in assembling a diversified portfolio.

151. This paper proceeds on the basis that a portfolio could have a fair value that differs from the sum of the fair values of the individual items making it up. The question of which unit of account is appropriate on initial recognition must then be addressed.

152. *Pending further analysis and testing beyond the scope of this preliminary investigation, this paper proposes that the appropriate individual item or portfolio unit of account on initial recognition is generally the unit of account in which the reporting entity acquires an asset or incurs a liability. That unit of account can generally be expected to reflect the value-affecting properties of that asset or liability on its initial recognition.*

153. To take an example, if an entity makes individual loans, each individual loan may be considered to be the appropriate unit of account. The reflection of any enhancement, or diminution, of fair value resulting from the entity's activities to assemble loans into a diversified portfolio would be considered a matter for subsequent asset re-measurement and revenue/income recognition. In other words, any portfolio effect would not be considered to be a value-affecting property of the entity's individual loans at the time of their initial recognition.

 

154. On the other hand, if an entity acquires portfolios of loans, the portfolio would presumably be the appropriate unit of account on the basis that it reflects the value-affecting properties of the acquired loans on initial recognition. In some cases, however, the acquisition of a portfolio may also include other assets or liabilities. For example, the acquisition of a credit card portfolio is likely to include an intangible asset representing future cash flow benefits expected to result from future business with card holders as well as the current receivable balances. This intangible asset has different value-affecting properties that may warrant separating it from the receivables portfolio for subsequent accounting purposes. If the intangible and receivable balances are treated as a single unit of account, it will be important to describe and subsequently account for it as a composite of the receivable portfolio and intangible (customer relationship) elements.

*Level of Aggregation*

155. For the purposes of this paper, aggregation is considered to be the combining of individual assets or liabilities to create a different asset or liability. The nature of aggregation issues appears to differ as between contractual assets and liabilities and non-contractual assets.

CONTRACTUAL ASSETS AND LIABILITIES

156. The basis for assessing the appropriate aggregation or disaggregation of contractual assets and liabilities depends on the adjudged substance of their terms and conditions. Difficult questions have arisen about recognizing and defining assets and liabilities that result from complex transfers of contractual rights and obligations (for example, securitizations of receivables portfolios). As well, there are questions with respect to whether certain financial contracts should be disaggregated into two or more units of account (for example, certain "hybrid" securities that contain embedded derivatives). These questions would seem to relate to the implications of perceived interdependencies between contractual rights and obligations. For example, suppose an entity transfers a portfolio of receivables to a third party, and provides a guarantee to the transferee against default risk, in return for cash. Should it be treated in the transferor's financial statements as (i) a sale of the receivables with the guarantee recognized as a liability (a disaggregated treatment), or (ii) as a loan to the transferor collateralized by the receivables (an aggregated treatment)? These seem to be largely questions of recognition and derecognition, with the units of account for measurement determined by the standards governing what assets or liabilities are to be recognized.

NON-CONTRACTUAL ASSETS

157. A different form of level-of-aggregation issues arises in respect of non-contractual assets that are inputs to cash-generating processes. One example is the construction of a building from bricks, steel, cement, labour, and other inputs. In this case, the unit of account is not the individual inputs, but what has been constructed with them. The individual inputs have lost their separate identities in their transformation into the building. It may be reasoned that the unit of account is the building, although certain components (for example, the elevators) may be treated as separate asset units for accounting purposes when they can be justified as having separate identities (for example, for depreciation purposes).

158. A more problematic example is the acquisition of equipment that is moved to a particular factory location, configured for a specialized use, and installed within an assembly line (perhaps cemented in place) so that it could have no alternative use. The asset's value-affecting properties are likely to have been fundamentally changed by its specialization and installation. The entry market in which the equipment was purchased no longer establishes its fair value because of its transformation. The asset to be measured is no longer the equipment originally

purchased. Is the appropriate unit of account on initial recognition the reconfigured equipment in its location and condition? Or is it the assembly line into which the equipment has been incorporated? In other words, should the acquisition, specialization, and installation of the equipment be considered to be an addition to the assembly line?

159. The fair value of the aggregated asset may differ significantly from the sum of the fair values of the individual inputs, depending on the market's valuation of possible synergistic effects resulting from their combination.[57] Furthermore, assets to be used in a cash-generating process may be aggregated at progressively higher levels. For example, the assembly line might be aggregated with other assets to the level of the factory, or further combined with other assets and liabilities to the level of the cash-generating unit as a whole.[58]

160. The question is whether there is any basis for determining the appropriate level of aggregation for non-contractual assets on initial recognition. "Initial recognition" has been defined for the purposes of this paper (see paragraph 68) to include development to the point of readiness to contribute to the generation of future cash flows. On the basis of this definition, any synergistic effects of the aggregation of inputs into an asset to make it ready to contribute would be reflected in its fair value on initial recognition. This definition of initial recognition proposes aggregation to the lowest level at which an identifiable non-contractual asset is ready to contribute to the generation of future cash flows. Beyond this point, any enhancement or diminution of asset value would seem to be a matter for subsequent recognition and re-measurement consideration.

161. *Pending further study beyond the scope of this preliminary investigation, this paper proposes that the appropriate unit of account for non-contractual assets on initial recognition is the lowest level of aggregation at which an identifiable asset is ready to contribute to the generation of future cash flows.*

### Determining the Appropriate Market(s)

162. Having defined the asset or liability unit of account and essential properties affecting fair value, two sets of questions need to be addressed:

(a) What market or market-equivalent sources of fair value exist in respect of the asset or liability to be measured on initial recognition?

(b) When there is more than one market, each of which yields a different market value, what are the causes of the differences? Can they be attributed to differences in the assets or liabilities being traded in the different markets? If not, which market establishes fair value?

163. The following is a preliminary discussion of several issues and circumstances that have commonly been raised in debating multiple market, or "which market", questions. These issues and circumstances are considered within the context of the conceptual analysis to this point in the paper.

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[57] Some entity-specific values will also differ depending on the level of aggregation. For example, entity-specific measures of a factory's value in use may exceed the sum of cost or other entity-specific measures of the carrying amounts of the individual assets composing the factory.

[58] For the purpose of implementing its standard on asset impairment, the IASB defines "cash-generating unit" as "the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets" (IAS 36, paragraph 5). Several national standard setters have similar definitions.

 

### *Entry and Exit Markets and Related Issues*

164. Similar assets and liabilities are traded at different prices in different entry and exit markets under various circumstances commonly found in practice. Of course, what is an entry market to one entity (the buyer in that market) will be an exit market to another entity (the seller in that market). The following are some typical situations.

#### *Loan Assets*

165. An entity that makes loans to individual borrowers is actively operating in one market (the market in which it makes loans, which is the entry market for that entity) and it may also be able to sell its loans in an exit market (the market for selling or securitizing portfolios of its loans). It has been observed above (in paragraphs 149-154) that a portfolio might have a fair value that differs from the sum of the fair values of the individual loans that make up the portfolio. This paper has tentatively concluded (in paragraph 152) that the appropriate unit of account on initial recognition in this case is the individual loan, and that any increase or decrease in fair value resulting from assembling loans into portfolios is a matter for subsequent recognition and re-measurement consideration.

166. Generalizing from this situation leads to the following proposition:

> *In measuring an asset or liability on initial recognition, an entity should generally look to the market in which it acquired the asset or incurred the liability.*

167. The validity and usefulness of this proposition may be best assessed by testing it against various conceivable entry-exit market situations. A preliminary analysis of examples of several such situations follows.

#### *Wholesale and Retail Markets in Which an Entity Buys Wholesale and Sells Retail*[59]

168. Suppose that an entity is a hardware retailer and that it acquires nails for 1.00 per kilogram in bulk in the wholesale market and then sells them in smaller quantities for 2.00 per kilogram in the retail market. What is the fair value of those nails on initial recognition?

169. Although the physical properties of individual nails undergo no change from the wholesale to the retail market, the retailing function subsequent to their acquisition may be considered to add a fair value enhancing property to these nails for retail customers. If this is accepted, then the above proposed principle would seem to hold in this case. In other words, it may be reasoned that the appropriate market for the retailer in measuring the fair value of nails on initial recognition is its entry (wholesale) market, and that any excess of the retail price over the wholesale price is a result of retailing activities subsequent to initial recognition. The recognition of any value added by the retailing function is a matter for re-measurement, when it is determined that recognition conditions for re-measurement have been met or when the nails are sold.

#### *Large Blocks and Volume Effects*

170. An asset's value-affecting properties will often include the size or volume of the asset that is acquired. For example, there may be a fleet discount on trucks or automobiles, or different fair values for large and small blocks of securities. As with wholesale and retail markets, it may be reasoned that measurement on initial recognition should be based on the market in which the asset to be measured was acquired. One caveat: an entity should generally be expected to

[59] The liability equivalent occurs when an entity incurs a liability in a retail market and settles it (or could settle it) in a wholesale market. Some issues arising in this context are discussed in paragraphs 174-177.

acquire assets in the most advantageous market open to it on initial recognition. For example, it would generally be expected that an entity qualifying for fleet discounts would determine the fair value of its trucks on initial recognition on the basis of prices in the fleet market, even if it did not take advantage of that market.

171. There has been much debate, and considerable inconsistency in practice, with respect to whether or when estimates of the fair value of large blocks of securities should adjust the observable market prices for smaller blocks.[60] This would not normally be an issue on initial recognition because, reasoning from the proposition in paragraph 166, the market on initial recognition will generally be that in which the block or blocks were acquired. The effect of creating a large block as a result of a number of purchases of smaller blocks would be a matter for subsequent re-measurement consideration.

*Demand Deposit Liabilities*

172. A depository institution receives deposits from customers in return for providing contractual promises to repay the amounts on deposit (plus any interest and less any charges, and subject to any conditions specified in the contract) on the demand of the depositors. This is the entry market to the depository institution. The terms of these contracts are presumably determined in an active market involving knowledgeable, willing parties at arm's length. Depository institutions on occasion transfer portfolios of deposit liabilities to other depository institutions, thus creating an exit market. The fair value of a portfolio of demand deposits will typically differ from the sum of the principal amounts of the individual deposits (entry values) that make up the portfolio. At least part of this difference is likely to be values that are not attributable to the deposits themselves. In particular, the observable market prices at which portfolios of demand deposits are exchanged generally include not only the fair value of the deposits per se, but also the fair value of benefits expected to be obtained from the customer relationships, that is, from future transactions with these depositors. This paper takes the position that such benefits are intangibles that should not be considered a reduction of the fair value of deposit liabilities on their initial recognition by depository institutions. Rather, the expected benefits of the customer relationships should be evaluated separately as an intangible asset and considered for recognition and measurement as such.[61]

173. It may be claimed that, even after removing the effects of these and other possible value affecting differences between the deposits traded in the entry and exit markets, there will still be a difference on initial recognition. More specifically, it may be claimed that any reasonable determination of the exit value of demand deposits, calculated as the present value of future cash payouts to depositors estimated on the basis of market conditions and expectations, will be less than the entry value.[62] The argument is then made that the most advantageous fair value (the exit value) should be selected by depository institutions on initial recognition of deposits, on the basis the highest-and-best-use premise of market value. Acceptance of this argument means that depository institutions would report a gain at the time that a deposit is made, and the proposition that there can be only one fair value for any given item on any given date would not stand up. However, perhaps this apparent difference is due to some portfolio

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[60] See FASB Exposure Draft, *Fair Value Measurements,* paragraphs C29-C38 and C78. In significant part, the debate relates to reliability issues.

[61] For a discussion of this issue, see Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items*, paragraphs 336-339 and 4.29-4.32.

[62] This circumstance arises in part because this exit value takes into account the expectations of buyers and sellers that a significant percentage of demand deposits will be left on deposit for an extended period, during which they will bear a lower rate of interest than would be borne by term deposits over the same term.

 

creation effect, to unrecognized future costs that will have to be incurred to service the deposits, or to some other difference between the value-affecting properties of the deposits in the two markets. If so, the items being measured in the entry market are not the same as the items being measured in the exit market. This would seem to require further study.

*Warranty Liabilities and Similar Performance Obligations*

174. Suppose that an entity is a television retailer that also sells warranty contracts extending beyond the manufacturer's warranty. The retailer's entry market is that in which it incurs the warranty liabilities, that is, the market with its customers. Its exit market is the market in which it could pay a third party insurer to assume the warranty service obligations. Again the question is whether there could be differences in fair value prices between these two markets and, if so, whether they can be fully explained by differences in the properties affecting the fair value of the liabilities traded in the two markets.

175. Arguments have been made that the fair value on initial recognition of such a warranty liability should be determined on the basis of the exit market with third party insurers, rather than the entry market with customers.[63] Primary among these arguments is that the price in the retailer's market with customers is increased by marketing and related costs that must be incurred by retailers to inform potential customers and sell warranties. In other words, the market price required by retailers to enter the market with customers is increased by these costs and, presumably, a commensurate return for this effort. Third party insurers can be expected to accept a lower price to assume the obligation under this warranty contract because the marketing effort has taken place, so that insurers will not have to bear these costs. Thus, there would seem to be a potentially significant difference between the market prices in the entry and exit markets in this case that does not relate to the value-affecting properties of the warranty contracts per se.

176. However, there are other factors than can cause differences in the value-affecting properties of warranty contracts as between these two markets. In particular, differences in the credit and performance risks of the retailer and a particular insurer could affect the fair value of the warranties. In other words, a knowledgeable customer could be expected to pay less for a warranty that is provided by an insurer with a poor performance record and low credit quality than for a warranty provided by an insurer with a strong performance record and a high credit rating (in effect, the two warranties would be considered different assets by the customer). A knowledgeable customer may be unlikely to allow the retailer to pass its liability to an insurer that may not be as good a risk, without at least the retailer remaining contingently liable or paying the customer for the difference in the risks borne. On the other hand, although the customer may be content to allow the retailer to pass its liability to an insurer that is a better risk, that insurer is likely to charge the retailer more for assuming the risk than the retailer received from its customer. Thus, the retailer's exit market value on initial recognition would be expected to reflect the higher of its own credit and performance quality and that of the insurer. As well, for many liabilities of this nature, any third party insurer market may be purely hypothetical if the obligations can be fulfilled only by performance by the retailer. Examples may include warranties in respect of specialized, made-to-order products, and performance obligations under magazine subscriptions. In addition, there may be portfolio creation effects.

[63] FASB staff proposed this in a paper on Measuring Financial Performance Obligations at Fair Value, which was discussed with the IASB in May 2004.

177. On balance, it appears that some significant differences in market values as between entry and exit markets for warranties and similar performance obligations may not be explained by differences in the value-affecting properties of the liabilities on initial recognition. However, on the basis of the above analysis, this paper suggests that these performance obligations may be most appropriately measured on initial recognition by reference to the entry (customer) market, except if specified conditions justifying immediate re-measurement at a reliably estimable exit market value are met. These conditions and, more generally, basic issues relating to measurement of performance obligations, require in-depth study that is beyond the scope of this paper.

*Finished and Partly Finished Goods*

178. Finished and partly finished goods are not considered to be assets arising on initial recognition when they are produced by the reporting entity. Such assets are outputs from the entity's production process rather than inputs being readied for use in a cash-generating process. Their carrying amounts reflect the accumulation of previous measures of the inputs used to make them, until such time as recognition criteria are met for their re-measurement. Thus, the question of the measurement of finished and partly finished goods manufactured by an entity is usually one of re-measurement when revenue recognition criteria are met.

*Business Acquisitions*

179. A business acquisition gives rise to the need to measure the assets and liabilities of the acquired entity as of the acquisition date (which is the date of initial recognition by the acquirer). Questions arise as to what may be the appropriate market for these assets and liabilities; the market in which they were initially acquired or issued may have no relevance. Finished and partially finished goods inventories held by the acquired entity at the acquisition date are cases in point. As in all cases, the first step in measuring these assets is to determine the appropriate units of account and value-affecting properties, including location and condition, on the measurement date. It may be most appropriate to derive the estimated fair value for these goods from the market in which they will be sold (with adjustment for differences of location, condition and degree of completion).

*Summary*

180. The *a priori* expectation reasoned from the market value measurement objective is that there can be only one fair value for a particular asset or liability on a measurement date (paragraph 135). Questions arise as to what this fair value is when there is more than one market with different prices for similar assets or liabilities. This paper proposes that such differences may be due to value-affecting differences between the assets or liabilities traded in these different markets or to entity-specific transaction or other costs or benefits that should be excluded from the determination of fair value. This paper further suggests that, in many cases, it will be found that the best source for fair value measurement on initial recognition will be the market in which the asset or liability to be measured was acquired or incurred, because the assets or liabilities traded in these markets are generally likely to have the same value-affecting properties as the asset or liability being measured at that date. However, the above examples demonstrate that there are some situations in which there will be no such entry market (for example, finished goods inventory of an acquired business), or entry market prices may not be relevant (possibly, for example, in respect of deposit liabilities and certain performance liabilities). These are areas requiring further study beyond the scope of this preliminary investigation. In any case, it is necessary to identify and adjust for any differences in the properties affecting the fair value of market traded assets or liabilities and the asset or liability being measured.

 

181. It seems anomalous that different markets could exist with different prices for identical assets or liabilities on a measurement date. However, there appear to be significant situations in which multiple markets for identical assets or liabilities do exist, possibly the result of legal requirements or licensing arrangements that restrict access to certain markets. Some possible situations are:

(a) Access to wholesale markets for fresh fruits, vegetables, meat or certain other food products may be limited in some jurisdictions to accredited entities, to the exclusion of others.

(b) In some countries, entities may be required to make cross-border foreign currency transactions above a specified amount through the country's central bank. In such circumstances, the foreign currency must be bought from or sold to the central bank at the bank's established rates, which may differ from the unregulated exchange rates for smaller transactions. Such situations may require special consideration, and it may be questioned whether the transactions with the central bank in this case can qualify as a market (see paragraphs 107-110).

(c) It has been claimed that used cars traded in certain auction markets accessible only to licensed traders may have lower prices than identical cars sold in used car retail markets.

182. This paper proposes in-depth study of markets with apparently different prices for identical assets or liabilities, to assess the nature and causes of those price differences. Where market value differences cannot be attributed to different value-affecting properties, then there would have to be a defensible rule for choosing between these markets. One proposal is that the most advantageous market price available to the entity should be selected.[64]

### *Other Market-Related Considerations*

#### *Information Asymmetry*

183. Information asymmetry exists when some market participants have, or are thought to have, information about certain value-affecting properties of an asset or liability that is not available to other market participants. It was proposed earlier in this paper (paragraph 109) that the concept of "knowledgeable" in the definition of fair value should be presumed to mean that market participants have reasonable access to publicly available information. This does not preclude the possibility that some participants may have additional private information that, had it been known to other participants, could have affected the price that they would have been willing to pay or receive.[65] To illustrate, the seller of a warranty may have private information about certain risks related to its ability to meet the terms of the warranty that is not available to potential buyers of the warranty. For example, the seller may know that its financial situation is such that it is at high risk of defaulting on its warranty obligation, or have private information about the quality of its product that, if known to buyers, would affect the market value of the warranty.

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[64] This is proposed in FASB Exposure Draft, *Fair Value Measurements*, paragraph 16. See also Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items,* paragraphs 95-99, 340-341, and 4.33. Both documents suggest that such a rule would require significant supporting guidance. For example, the market that provides the most advantageous price is not necessarily determined by the lowest market price available to the buyer or the highest market price available to the seller. To illustrate, if a particular buyer could pay a price of 100 in market A plus transaction costs of 4, or a price of 101 in market B plus transaction costs of 2, the total cost to the buyer in market B of 103 is more advantageous than the total cost to the buyer in market A of 104.

[65] For an analysis of the effects of information asymmetry in the market for used cars, see "The market for 'lemons': quality uncertainty and the market mechanism", in George A. Akerlof, *An Economic Theorist's Book of Tales*, chapter 2.

184. Some may believe that fair value should be determined on the presumption that there is no information asymmetry, that is, that all participants have access to all public and private value-affecting information. Others acknowledge the existence of information asymmetry but believe that it should generally be ignored because there is no practical way of assessing its effect on fair values.

185. Information asymmetry is an information uncertainty risk. To illustrate, a rational buyer of the warranty described in paragraph 183 may be expected to reduce the amount that he or she would be prepared to pay, to allow for the risk that the seller may be withholding adverse private information on its capability to perform under the terms of the warranty. The seller, recognizing this, could be expected to try to reduce that information uncertainty if it believes this could result in a higher price. The seller might, for example, make available its audited financial statements or an independent certification of its credit rating. The provision of such information may reduce but not eliminate the information asymmetry concerns of potential buyers in the marketplace. These activities can have significant effects on market value.

186. The values that different market participants may place on information asymmetry seem to be indistinguishable from entity-specific expectations generally. In particular, an entity's expectations may be based on private information or beliefs, for example, on the belief (which may or may not be well-founded) that it has superior knowledge to that of other market participants. To illustrate, the purchaser in a business combination may perceive certain synergies in combining its existing business with that of the acquiree, based in part on its private knowledge of its own business. As a result, information asymmetry may interact with other entity-specific factors in determining the maximum price a purchaser would be willing to pay. Information asymmetry might, for example, cause a potential buyer to reduce the amount it would otherwise be prepared to pay for a given asset, but its valuation of the asset may be affected as well by many other entity-specific factors, including its expectations for the use of the asset, its income tax position, and perhaps perceptions as to the asset's liquidity. Paragraphs 101-110 discuss the process by which diverse entity-specific expectations and assumptions are resolved to the market price for a particular asset or liability on any given date.

187. Finally, it is probably not possible to know what information the market has, that is, to determine what information may be in the public domain and impounded in a market price, or how information asymmetry may have affected a market price. This seems to create problems in trying to remove any effects of information asymmetry from a market price or in trying to incorporate it into a fair value estimate where there is no observable market price. This issue will be considered in assessing the reliability of fair value estimates in chapter 7.

*Bid-Asked Spreads*

188. The bid price in respect of an asset is the price at which a prospective buyer formally offers to buy it, and the asked price is the price at which a prospective seller formally offers to sell it.[66] In a dealer market for actively traded assets, quoted bid and asked prices on a given date are likely to represent the prices that dealers were paying and receiving on that date, in which case the spread may be considered to represent transaction costs to the buyers and sellers (see the following section on transaction costs). Fair value would then be measured by bid prices for long positions (assets) and asked prices for short positions (liabilities). However, in other cases a bid-asked spread, which may be wide, is likely to represent in large part some significant uncertainties, and may indicate only the range in which fair value may lie. Actual transactions

[66] See *Kohler's Dictionary for Accountants,* 6th edition.

 

could take place anywhere within that range on the measurement date. Thus, when there is a wide bid-asked spread one may need to look to other sources to estimate fair value within that range. There is no conceptual justification for assuming that the mid-point value in a bid-asked price spread is a better estimate than any other point in the range.

*Market Accessibility and Related Issues*

189. A commonly expressed view is that it is inappropriate to measure the fair value of an asset or liability on the basis of a market that is not accessible to the entity owning the asset or owing the liability. It was observed in paragraph 181 that market accessibility restrictions may explain some situations in which there appears to be more than one market with different prices for the same asset or liability. It is important to define carefully what is meant by "market inaccessibility" and whether it may take different forms, with different implications for fair value measurement. For example, a market for a particular asset may not be accessible by an entity in its own right, but the entity may be able to contract with someone who can trade in it to acquire an asset in that market and then sell it to the entity. In other situations, a market may be inaccessible to an entity as a result of legal or other restrictions on who can own or operate particular assets. This paper proposes that research should be undertaken to determine the nature and bases for restricted access markets and their fair value measurement implications for similar items that may, or may not, be traded in other markets.

THE DISTINCTION BETWEEN MARKET VALUES AND AMOUNTS THAT COULD BE IMMEDIATELY REALIZED OR SETTLED

190. Some have equated market (fair) values with immediate realization or settlement amounts. For example, some have equated the fair value of long-term debt with the amount at which it could be settled with the creditor on the measurement date. The concern is then raised that this amount may not be an accessible possibility to the debtor and, even when it is possible, it may involve prohibitive costs and penalties that would be irrational for the entity to incur. If there is an immediate settlement option, that settlement amount is not fair value but is the amount that would be paid under the terms of the debt contract if the settlement option is exercised. It is, therefore, equivalent to the exercise price under an option agreement. As such, it is the amount of a hypothetical debt repayment transaction with the creditor, rather than the amount that would be negotiated for an exchange of the debt between arm's length parties on the measurement date.[67]

191. In a more general sense, this paper reasons that the fair value of an asset or liability is not its liquidation value on immediate sale or settlement on a measurement date when this amount does not reflect the market's expectations for its highest and best use. Most assets and liabilities are designed or expected to generate or repay cash flows over periods of time. They may be held, sold or settled, depending on what is perceived to be the most advantageous course of action. The market measurement objective does not embody any expectations for realizing, settling, holding or using any asset or liability, beyond the general market expectation of highest and best use. The time period for realization or settlement does not matter to this objective because time and attendant risks are adjusted for in the marketplace in terms of present value equivalents (discounted at market rates of return for the time and risks of waiting). Certainly, the marketability and liquidity of an asset or liability are risk-related factors that may affect its

[67] A measurement question arises if a contractual asset or liability contains an option that gives an entity the right to settle it at a price that is more advantageous than its market price. See the discussion of this issue in Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items,* paragraphs 100-101, 342-343, and 4.28. Such a situation seems most likely to arise subsequent to initial recognition.

fair value. For example, an asset that is highly liquid or marketable is likely, other things equal, to trade at a premium to one that is not. Such a premium represents the price that the market puts on reduced liquidity risk as part of its process of determining present values of risky future cash flows.

192. In summary, this paper reasons that the amount at which an asset or liability would be realized or settled on a measurement date may be accepted to be its fair value on that date only if one of the following conditions is met:

(a) It is a market price meeting the conditions of a market proposed in paragraphs 107-110. This would not be the case, for example, in the situation discussed in paragraph 190.

(b) It can be equated to an observed market price for an asset or liability that is sufficiently similar to the asset or liability being measured that reliable adjustment can be made for value-affecting differences. If the differences are too great to enable the market price to be reliably adjusted, other alternatives will need to be considered. These situations give rise to questions of reliably estimating the market value of an asset or liability on initial recognition. General conceptual issues relating to reliability are addressed in chapter 6, and issues relating to the reliability of fair value estimates in chapter 7.

### Transaction Costs

193. The IASB defines transaction costs in the context of financial instruments as follows:

> "Incremental costs that are directly attributable to the acquisition, issue or disposal of a financial asset or financial liability. An incremental cost is one that would not have been incurred if the entity had not acquired, issued or disposed of the financial instrument."[68]

Transaction costs comprise the direct costs of the transaction itself (such as fees or commissions paid to agents, brokers, and dealers), and any levies, for example, by regulators or securities exchanges, and transfer taxes, duties, and sales taxes that are payable as a result of an exchange transaction.

194. It is proposed that an essential defining characteristic of transaction costs for the purposes of measuring fair value is that such costs are not recoverable in the market for the underlying asset or liability on the measurement date. Costs incurred by an entity to acquire an asset, or to issue a liability, that can be recovered in the market for that asset or liability should not be considered to be transaction costs, but rather should be included in determining the fair value of the asset or liability on initial recognition. As an example, suppose that a particular commodity must be imported and attracts an import duty that is paid by the importer. The duty is not a transaction cost as defined above if the importer could recover it in reselling the commodity in the domestic market because buyers in the domestic market would have had to pay the duty themselves if they had imported the commodity. It is not necessary that the importer intend to resell the commodity, because the market value of an asset or liability on initial recognition is unaffected by an entity's marketing intentions.[69]

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[68] IAS 39, paragraph 9.

[69] It is possible that a cost may be recoverable only in part in the marketplace, in which case only the portion that is not recoverable would be considered to be a transaction cost.

 

195. The first sentence of the above IASB definition of transaction costs is extended for the purposes of this paper as follows:

> Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of an asset or liability and, for the purposes of measuring the fair value of the asset or liability, are not recoverable in the marketplace on the measurement date.

196. *This paper concludes that transaction costs, as defined above, incurred on the acquisition of an asset or on the incurrence of a liability are not part of the fair value of the asset or liability on initial recognition.*

197. Transaction costs may be included in the quoted price for an asset or liability. For example, the price quoted for a real estate property may be 1,100,000, inclusive of commissions, transfer fees, and sales taxes of 100,000 to be paid by the vendor, none of which are recoverable in the marketplace. The fair value of this property is the amount net of these transaction costs.

198. Transaction costs incurred in acquiring an asset or liability are, therefore, recognized separately as a charge to net income on initial recognition when the asset or liability is measured at fair value. As a result, transaction costs do not give rise to any difference between entry and exit value under the market value measurement objective. However, under an entity-specific measurement objective, such costs could be added to the measure of an asset, or deducted from the measure of a liability, on initial recognition if the entity expects that the costs will be recovered from future activities involving the asset or liability.

199. Questions also arise as to the treatment of transaction and other costs that an entity may have to pay in order to realize the fair value of an asset or to settle the fair value of a liability. Such costs that cannot be avoided, but must necessarily be paid in future to achieve the fair value of an asset on the basis of its highest and best use, or to repay the fair value of a liability on the basis of its most efficient repayment method, may meet the definition of a liability. In this case, they should be separately recognized as liabilities when the related asset or liability is recognized and measured at fair value. If these costs are not recoverable in the marketplace, they would be treated as expenses on recognition, rather than included in the fair value of the asset or liability.

200. Costs that are considered necessary to complete an asset should be distinguished from transaction costs. The fair value objective is to measure the fair value of an incomplete asset in its place and condition at the measurement date. An appropriate estimate of the fair value of an incomplete asset might be made by deducting the discount that the market would require for the asset's lack of completeness from the observable fair value of an otherwise equivalent complete asset. In principle, this discount is not the entity's estimate of the costs to complete (although that estimate plus a profit margin might be considered a near enough approximation in some circumstances).

# Chapter 6 — General Conceptual Analysis — Reliability

## Defining Reliability

201. The analysis of chapters 4 and 5 has focused on fundamental conceptual considerations relating to assessing the relevance of alternative measurement bases on initial recognition. We now turn to reliability, and to defining and considering factors affecting how well measurement bases are able to achieve their objectives, that is, how well they are able to represent what they purport to represent. As CON 2, paragraph 62, states: "Accounting information is reliable to the extent that users can depend on it to represent the economic conditions or events that it purports to represent."[70]

202. While most of the conceptual frameworks indicate that a trade-off must be made between relevance and reliability, the ASB's *Statement of Principles for Financial Reporting* (paragraph 3.34) states that, when the most relevant information is not the most reliable, "... it will usually be appropriate to use the information that is the most relevant of whichever information is reliable." IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* reflects a similar balance of relevance and reliability. Paragraph 14 of IAS 8 permits a voluntary change in an accounting policy "only if the change ... results in the financial statements providing reliable and more relevant information ...." This paper proposes to adopt this approach of the ASB and IASB in evaluating alternative measurement bases. In other words, it is proposed that, when more than one alternative measurement basis achieves an acceptable level of reliability,[71] the most relevant of these bases should be selected. Thus, if there can be agreement on the most relevant measurement basis on initial recognition, the question then becomes whether it can pass a reasonable reliability test; it does not also have to be the most reliable measurement basis.

203. Reliability is considered to have three attributes: representational faithfulness, neutrality, and verifiability (see paragraphs 40-44). Of these, the basic underpinning is provided by representational faithfulness. CON 2, paragraph 59, emphasizes this: "The reliability of a measure rests on the faithfulness with which it represents what it purports to represent, coupled with an assurance for the user, which comes through verification, that it has that representational quality." Thus, the appropriate starting point for an analysis of the reliability of a measurement basis is to examine what it purports to represent. The attribute of neutrality then relates to freedom from bias in representing what is purported to be measured, and verifiability relates to the degree of consensus amongst knowledgeable measurers in applying a measurement basis.

204. Limitations on the reliability of a measurement basis result from some form of measurement uncertainty, which exists when the amount of an asset or liability measured on that basis on a measurement date could be a variety or range of different reasonably possible or justifiable amounts. Two sources of measurement uncertainty may be identified:

    (a) Estimation uncertainty.

    (b) Economic indeterminacy.

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[70] The IASB *Framework* adopts a similar position: "Information has the quality of reliability when it is free from material error and bias and can be depended upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent" (paragraph 31).

[71] A measurement may be considered to achieve an acceptable level of reliability if it meets the general reliability condition for recognition of the asset or liability, that is, if it results "in a cost or value that can be measured with reliability" (IASB *Framework*, paragraph 83(b)).

 

## Estimation Uncertainty

205. An estimate involves a judgment about an uncertain existing condition or future outcome. Examples in accounting include measurements based on an estimate of the quantity of gold in a gold mine (an uncertain existing condition) and an estimate of the future timing and amounts of cash flows to be received from a loan receivable (an uncertain future outcome). In these cases, the actual amount of gold in the mine and the actual timing and amounts of cash receipts from the loan will ultimately be capable of observation, possibly providing evidence about the validity of earlier estimates and the measurements based on them. In other cases, such as the fair value of an employee stock option, there may be no observable transaction, event, or other phenomenon to provide evidence about the validity of an estimate.

206. Actual outcomes may not be a fair indication of the reliability of prior estimates, however. This is because an outcome may be affected by future events or circumstances about which information did not exist at the measurement date. Thus, the reliability of a measurement estimate should be judged on the basis of the facts and the validity of assumptions at the measurement date, and not by the subsequent outcome.[72]

### *Distinguishing Estimation Uncertainty from Risk-Related Volatility*

207. One must distinguish between estimation uncertainty and volatility. To illustrate, a foreign exchange rate may be capable of precise determination on any given date from an observable active foreign exchange market, so that there is no estimation uncertainty as to the rate at which, for example, a loan denominated in that currency should be translated. But this rate may be highly volatile, that is, susceptible to significant fluctuations over time as underlying market exchange rate conditions change. Thus the exchange rate is reliably measurable at any point in time, but is volatile over time.

208. Some confuse the reliability of a measurement that purports to reflect the effects of changes in economic conditions as they take place with the volatility of the value over time. For example, if an estimate of fair value accurately depicts the amount for which an asset or liability could be exchanged between knowledgeable, willing parties in an arm's-length market transaction on a measurement date, then it is reliably measuring what it purports to represent. The volatility of this value over time is simply reflecting the effects of changes in underlying market conditions. Those who may object to this volatility being measured and presented in financial statements are presumably taking issue with its decision usefulness or relevance. However, concern about how well an estimate of the fair value of an asset or liability represents what fair value purports to measure is a reliability concern. Thus, it is important to distinguish reliability from volatility arising from changes in conditions that are captured by a measurement basis.

### *Tolerance for Estimation Uncertainty*

209. There are many examples of significant estimation uncertainty in financial accounting, including:

(a) a current value measurement of a liability under a contentious lawsuit,

(b) the estimation of future salary increases in a current value measurement of a salary-based defined benefit pension plan, and

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[72] Nevertheless, examining actual outcomes can be helpful in reviewing and improving estimation techniques when the factors affecting subsequent events are taken into account. Reconciling prior estimates with actual outcomes can be an important part of a system of procedures and controls to help ensure the reliability of measurements that depend on estimates of future outcomes.

(c) the estimation of liquidity and volatility parameters entering into the fair value measure of an option to buy or sell an asset when that asset is not traded in an active market.

210. It is well accepted that accounting cannot avoid some degree of estimation uncertainty. The IASB *Framework* includes the following statement:

> "In many cases, cost or value must be estimated; the use of reasonable estimates is an essential part of the preparation of financial statements and does not undermine their reliability. When, however, a reasonable estimate cannot be made the item is not recognised in the balance sheet or income statement." (paragraph 86)

211. The conceptual frameworks of national standard setters contain similar statements. Unfortunately, there is no quantitative basis for determining what constitutes "a reasonable estimate" for accounting recognition purposes. Rather, this has been left to individual standards and subjective judgments.[73] Although this paper does not address when assets or liabilities should be recognized (see paragraphs 13-15), the evaluation of alternative measurement bases on initial recognition necessarily requires consideration of their capabilities for reliable estimation. The analysis of alternative measurement bases in chapter 7 will consider the vulnerability of particular measurement bases to unacceptable degrees of estimation uncertainty and whether there may be ways of coping with that uncertainty.

### Economic Indeterminacy

212. A measurement basis may be subject to limitations in its ability to represent faithfully a particular economic phenomenon as a result of indeterminacy. Indeterminacy arises when it is not possible to define a phenomenon in sufficiently concrete terms to enable it to be validly quantified, at least without making significant limiting assumptions. In other words, some value-affecting quality or property of an asset or liability may be unknown and unknowable. CON 2, paragraph 68, illustrates this by reference to the problems of defining "intelligence" and judging whether intelligence tests measure it validly. Attempts to measure intelligence must fall back on the measurement of some observable behaviours, or on tests of verbal, arithmetic or other skills that are believed to be highly correlated with intelligence. The reliability of such measurements must be interpreted carefully, recognizing their inherent limitations.[74]

213. Similarly, what financial statements can purport to represent about the economic value of an entity is subject to significant indeterminacy limitations. Accounting has been described as the art of the possible. Conceptual frameworks stress that financial statements do not purport to show the value of an entity, but rather "... should provide information that is useful to those who desire to make their own estimates of the entity's value."[75] Financial accounting measurement is limited to assets and liabilities of entities that meet certain criteria for identification, recognition and measurement. It will be seen in chapter 7 that alternative measurement bases have different vulnerabilities to different types and degrees of indeterminacy in different circumstances.

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[73] For example, accounting standards have concluded that the future benefits of an entity's internal research efforts are generally incapable of sufficiently reliable estimation to warrant their recognition as assets in financial statements.

[74] An economic indeterminacy may affect not only the reliability of measurements of a particular economic phenomenon, but also its adjudged relevance. Users of financial information may conclude that a phenomenon is so indefinable that attempts to measure it are not helpful in formulating an economic decision.

[75] See CON 5, paragraph 27.

 

214. A basic economic indeterminacy in accounting involves arbitrary allocations or attributions. The problem arises when a measurement basis requires that the cost or value of an item be allocated among two or more assets or liabilities — the "one-to-many" attribution problem. It has been well demonstrated that there can be no unique non-arbitrary solution to a one-to-many or a many-to-many allocation.[76] There are numerous one-to-many and many-to-many allocations in present day financial accounting. For example, cost measurement bases normally require one-to-many allocations on initial recognition of assets acquired in basket purchase transactions and self-constructed assets that involve the use of other assets or overheads of the entity. Accounting standards may specify allocation methods to be followed in certain of these situations. Such accounting prescriptions may improve the verifiability of measurements, but cannot improve their representational faithfulness. Further, such prescriptions are subject to measurement bias in the sense that the arbitrary adoption of a particular allocation method necessarily precludes equally justifiable alternatives that yield different results. It will be seen in chapter 7 that the problem of arbitrary allocations differs as between measurement bases and situations.

215. Economic indeterminacy is a more fundamental problem than estimation uncertainty. Estimation uncertainty involves a known, quantifiable phenomenon that is subject to uncertain estimation, while indeterminacy results when a phenomenon cannot be sufficiently defined to be capable of estimation. However, an estimate of a quantifiable phenomenon (for example, a present value measurement of the cash flows to result from a research undertaking with highly uncertain outcomes) could be so uncertain that it may be considered indeterminate within a wide range. Such estimation uncertainty is difficult to distinguish from economic indeterminacy. Nevertheless, each represents a different source of measurement uncertainty, and it is proposed that it is important to understand the nature and source of a measurement uncertainty in assessing how it might be coped with and in judging the effects of such coping approaches on the verifiability, neutrality, and representational faithfulness of the resulting measure.

216. Market and entity-specific measurement objectives are susceptible to different reliability limitations. For example, the reliability (measurement uncertainty) of an entity-specific measurement may be subject to limitations in management's knowledge base, and to possible biases (including the optimism, pessimism, and risk tolerances) of the measurer (the entity),[77] as well as measurement uncertainties that are inherent in the particular entity-specific basis used. An observable market price for an asset or liability on a measurement date is not subject to measurement uncertainties. However, in the absence of such a market price, an estimated fair value may be open to significant measurement uncertainty.

### Disclosure

217. It is fundamental to statistical representation and the mathematics of probability that a valid depiction of the measurement of an uncertain phenomenon or state requires more than reporting a single amount selected from within the range of possibilities. The statistical properties of a number purporting to represent an underlying phenomenon or state include information about the nature, size and shape of the range of uncertainty. Thus, two basic

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[76] Two comprehensive works on this subject are: Arthur L. Thomas, The *Allocation Problem in Financial Accounting Theory* (Studies in Accounting Research No. 3); and Arthur L. Thomas, *The Allocation Problem: Part Two* (Studies in Accounting Research No. 9).

[77] Some conceptual frameworks introduce a distinction between measurement bias and measurer bias (see, for example, CON 2, paragraphs 77-78, and Australian Statement of Accounting Concepts SAC 3, *Qualitative Characteristics of Financial Information*, paragraphs 21-22). Measurement bias is bias that is inherent in a measurement basis. Measurer bias (sometimes termed "error") is a misapplication of a particular measurement basis in a particular circumstance to achieve a desired result.

properties of a single point measurement under conditions of uncertainty need to be conveyed to fully portray that measurement: (a) the basis for determining the single point measurement, and (b) the nature, size and shape of the range of possible values around that point. With respect to (a), in the case of estimation uncertainty, a single point measurement might be the most likely value in the range of possibilities under the particular measurement basis, or its probability-weighted mean (its "expected value"). When there is an area of indeterminacy, some formula or rule may be used (for example, the cost of an inventory asset may be calculated using a FIFO, LIFO, or weighted-average use assumption rule, and a marginal, full or variable cost attribution method). With respect to (b), unfortunately precise statistical quantification of ranges of uncertainty is rarely possible in financial accounting. However, this does not preclude the provision of useful qualitative, and in some cases quantitative, information about the nature and extent of an uncertainty. It seems to be well accepted, at least in principle, that such disclosures are relevant to full and fair financial reporting. For example, CON 2, paragraph 72, notes: "Reporting accounting numbers as certain and precise if they are not is a negation of reliable reporting."

218. The nature and extent of measurement uncertainty may depend to a significant degree on what a measurement basis purports to represent. For example, a measurement basis that purports to fully represent the effects of all economic conditions on the measurement date may be more susceptible to measurement uncertainty than a basis that has less ambitious objectives. Since the alternative measurement bases identified and defined at paragraphs 69-96 differ in what they purport to measure, they may be expected to have different susceptibilities to measurement uncertainties.

219. Thus, this paper concludes that information about measurement uncertainty should be considered an essential element of measurement reporting in financial accounting. From this it is reasoned that the evaluation of the reliability of a measurement basis should encompass information that can be provided about that measurement basis and the nature, size and shape of the range of any measurement uncertainty. Specifically, financial statement users are presumed to be interested in how an uncertain measurement has been derived from the range of reasonably possible amounts, and the nature and extent of the measurement uncertainty.

220. This paper proposes that the ability to provide useful disclosures about the information uncertainty of a measurement basis is an important factor in assessing its reliability. This does not condone unreliable measurements, but rather broadens the basis for assessing the reliability of alternative measurement bases. More specifically, it is proposed that a measurement basis should not be considered unreliable solely because it has a wide range of measurement uncertainty, if relevant and reliable information can be provided that enables users to understand the basis for determining the single point estimate and the nature, size and shape of the range of possible values around that point (see paragraph 217).

221. This proposal seems consistent with recent empirical research evidence, which indicates that the market incorporates observable differences in the reliability of accounting measures in the pricing of equity securities. A recent paper by an American Accounting Association committee surveyed this research. It includes the following summary conclusion and recommendation:

> "Research demonstrates that the investors incorporate reliability into equity prices and view reliability information as important to their investment judgments and decisions. Accordingly, the Committee encourages the FASB not to let constituents' concerns about information reliability to (sic) prevent recognition of relevant information. Rather, we support expanded disclosure of information on reliability of estimates. The more users

 

know about the models or methods used to calculate estimates and the assumptions used in those methods, the better they can assess the reliability of accounting measures and incorporate this information into their judgments and decisions."[78]

222. *In summary, this paper proposes that, in evaluating the reliability of a measurement basis, consideration should be given to both:*

*(a) the nature and extent of measurement uncertainty inherent in that measurement basis, and*

*(b) the relevance and reliability of supporting information on the nature and extent of measurement uncertainty that can be provided in respect of that measurement basis.*

223. As noted above (paragraphs 207-208), the risk-related volatility of a value over time is a separate dimension from measurement uncertainty at a point in time. Different measurement bases reflect the effects of various risks to different extents at different times. The responsiveness of alternative measurement bases to various risks and their relative abilities to facilitate risk analysis are clearly important in comparing and evaluating them, but these factors affect the relevance of the measurement provided under each basis rather than its reliability.

[78] American Accounting Association Financial Accounting Standards Committee, *Comments to the FASB on Measurement Reliability*, Unpublished Commentary, June 2, 2003, page 7.

# Chapter 7 — Analysis of Alternative Measurement Bases

224. Chapters 3-6 have presented a general analysis and evaluation of important conceptual considerations relating to the measurement of assets and liabilities on initial recognition. Chapter 7 will now take a more specific focus and examine each of the alternative measurement bases (which were identified and given working definitions at paragraphs 69-96) in the context of the general conceptual analysis.

225. Each identified measurement basis will be examined to define the underlying objective(s), measurement properties, and assumptions that characterize it in relation to other bases. A primary focus will be to identify and examine the areas of similarity and difference between alternative bases, so as to understand how, when, and why they yield different measurements. The ultimate purpose of this analysis is to assess whether one basis, or some reasoned combination of bases, is most appropriate on the initial recognition of assets and liabilities.

## Fair Value

226. The working definition of "fair value" is:

> The amount for which an asset or liability could be exchanged between knowledgeable, willing parties in an arm's length transaction (see paragraphs 88-93).

### *Relevance*

227. The tentative conclusion developed in chapter 4 (see paragraph 128) is that, subject to analysis of specific measurement bases and assuming reliable measurability, "... the market value measurement objective has important qualities that make it superior to an entity-specific measurement, at least on initial recognition." The market value measurement objective thus seems to be a logical point of departure for a comparative analysis of alternative measurement bases.

228. It has been reasoned that the fundamental objective of fair value is to reflect the market value of an asset or liability on the measurement date. When there is no observable market price for assets or liabilities with the same value-affecting properties as the asset or liability being measured, the objective is to estimate what the market price would be if a market existed (see paragraphs 92, 93 and 111).

229. Thus, the case for the relevance of fair value is based on its representation of the properties of market value — that is, on those properties of market value that have been identified and examined, and compared with entity-specific measurement objectives, in chapter 4. The direct association of the relevance of fair value with the properties of market value can be seen in authoritative accounting literature supporting standards that currently require fair value measurement.[79] It is on the basis of these market value properties that the relevance of fair value is compared with the properties of other measurement bases on the initial recognition of assets and liabilities. The reliability of estimates of fair value on initial recognition is then evaluated in relation to the faithfulness with which such estimates represent the properties of market value. A measure does not reliably represent fair value if it cannot be justified to faithfully represent these properties.

[79] See, for example, The Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items*, especially paragraphs 1.6- 1.13, and the sources cited therein.

 

230. The tentative conceptual conclusion in chapter 4, with respect to the superior decision usefulness and relevance of the market value objective over entity-specific alternatives on initial recognition of assets and liabilities, was made subject to:

(a) the specific examination of alternative measurement bases, and

(b) the condition that the fair value of an asset or liability can be measured with sufficient reliability to justify its recognition in financial statements.

231. The basic properties of fair (market) value relating to its decision usefulness and relevance on initial recognition have been set out in chapters 4 and 5, and so need not be repeated here, but will be addressed in more specific terms relative to the comparative analyses of the alternative measurement bases.

### *Reliability Limitations*

232. The estimation of fair value is subject to reliability limitations when there is no directly observable market price for an asset or liability on a measurement date. The question is whether there are circumstances in which a sufficiently reliable estimate of fair value is not possible with reasonable cost and effort and, if a reliable estimate is not considered possible, what can be done? Perhaps certain conditions underlying a pure fair value objective could be relaxed, or an alternative measurement basis that is capable of reliable estimation could be substituted for fair value or, as a last resort, no recognition could be given to the asset or liability.

233. The IASB and FASB have adopted a fair value measurement hierarchy in connection with their joint project on business combinations, which would use fair value as the measurement objective for assets and liabilities of businesses acquired. Recently, the FASB has proposed some changes to the fair value estimation hierarchy.[80] The hierarchy sets out general guidance on what should be considered to be best evidence of fair value at three basic levels of reliability. It is instructive to examine this hierarchy in considering:

(a) the nature and significance of fair value measurement uncertainties, and

(b) the approaches and assumptions that are used to resolve these measurement uncertainties to single amount fair value estimates.

The analysis of this hierarchy provides some insights into the reliability limitations of the resulting amounts, which in turn helps to provide a useful basis for comparison with alternative measurement bases on the initial recognition of assets and liabilities.

234. The fair value estimation hierarchy as developed to date may be envisaged in terms of three broad levels. Highest priority is given to observable market prices in active markets for assets and liabilities that are identical to those being measured, and lowest priority to inputs developed on the basis of an entity's own internal estimates and assumptions.

#### *Level 1*

235. Level 1 may be generally defined as follows:

> Fair value shall be estimated using observable market prices for identical assets or liabilities in active markets whenever that information is available.

This is the ideal, and fair value determined at Level 1 is a fully reliable measure of what fair value purports to represent.

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80 FASB Exposure Draft, *Fair Value Measurements,* paragraphs 14-24 and C43-C61.

236. The effective implementation of Level 1 requires a clear and consistent understanding of what is meant by an active market. This paper has attempted to identify and describe the essential attributes of the market value measurement objective (see paragraphs 107-110) and has proposed the following definition of "market" to embody these attributes:

> A body of knowledgeable, willing, arm's length parties carrying out sufficiently extensive exchange transactions in an asset or liability to achieve its equilibrium price, reflecting the market expectation of earning or paying the market rate of return for commensurate risk on the measurement date (paragraph 107).

237. Accounting standards have not yet defined what should be considered to constitute a market for the purposes of implementing the fair value hierarchy. However, the recent FASB Exposure Draft on *Fair Value Measurements* does propose a start at this:

> "In an active market, such as the New York Stock Exchange, quoted prices that represent actual (observable) transactions are readily and regularly available; readily available means that pricing information is currently accessible and regularly available means that transactions occur with sufficient frequency to provide pricing information on an ongoing basis. In determining whether a market is active, the emphasis is on the level of activity for a particular asset or liability."[81]

Certain aspects of this FASB description of an active market seem consistent with the definition of "market" proposed in this paper — notably that, for a market to exist, there must be sufficiently frequent or extensive transactions.

238. The definition of a "market" above also seems to be consistent with the definition of "Market Value" in the *International Valuation Standards* of property valuators. These standards state that:

> "The concept of Market Value reflects the collective perceptions and actions of a market .... Implicit within this definition is the concept of a general market comprising the activity and motivation of many participants ...."[82]

239. The definition of "market" proposed above would require some significant supporting guidance to enable reasonable and consistent judgments to be made about whether various possible trading situations can be expected to have the necessary attributes of markets. Such guidance is beyond the scope of this paper. However, certain issues that would seem to need to be addressed to develop such guidance are raised and discussed in the following paragraphs.

### The Knowledge Condition

240. One issue relates to the level of knowledge required by market participants. It was proposed earlier that the "knowledgeable parties" condition within the concept of fair value should be defined in terms of access to publicly available information (paragraph 109). It is further proposed that there must be a minimum level of public information to enable a market to exist. What the minimum level may be is an open question. However, presumably it should include current information about transactions and prices in respect of the particular assets or liabilities. The above paragraph quoted from the FASB Exposure Draft notes that, in an active market, "pricing information is currently accessible". Pricing information might be expected to include the quantities and quality of items traded as well as general market conditions and rates of return available in the marketplace for commensurate levels of risk. This does not, however, preclude the possibility of information asymmetry (see paragraphs 109 and 183-187).

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81 FASB Exposure Draft, *Fair Value Measurements,* paragraph 10.

82 International Valuation Standards Committee, "General Valuation Concepts and Principles", paragraphs 5.1 and 5.3, in *International Valuation Standards.*

241. Some have held that an asset or liability must have some significant period of exposure to the open market, or that there would need to be significant information dissemination, education, and marketing to inform potential participants about the asset or liability, for a market in it to exist.[83] Otherwise, they reason, the knowledge condition for that asset or liability would not be met. Open and active trading with extensive transactions in commonly traded securities and goods and services may be presumed to meet this condition. However, it may not be met for items that are thinly traded, are new to the marketplace, or are unique in some significant respect. This paper proposes, given the limited scope of its investigation, that there is a need for research to enable the knowledge condition underlying the concept of a market to be fully defined. If a market, as defined, cannot be considered to exist for an asset or liability on initial recognition, then reference would need to be made to other possible sources at lower levels of the hierarchy for estimating its fair value or to an appropriate substitute.

### Wide Bid-Asked Price Spreads

242. Market inefficiencies, including information asymmetries and various uncertainties, may lead to market prices that are not readily observable as single values but as potentially wide bid-asked price spreads, that is, price spreads that are due to more than just dealers' transaction facilitation fees (see paragraph 188). Such price spreads may represent ranges of indeterminacy when there is no convincing evidence about where in the bid-asked price range transaction prices can be expected to fall. This indeterminacy has often been "resolved" in past practice by selecting the mid-point in the range, but this convention would seem to have no conceptual justification when actual transaction prices could fall anywhere within the range.

### Transaction Price

243. The concept of a market as envisaged in this paper requires "sufficiently extensive exchange transactions in an asset or liability to achieve its equilibrium price." Paragraph 10 of the FASB Exposure Draft on fair value measurements (cited above) also states that in an active market "transactions occur with sufficient frequency to provide pricing information on an ongoing basis." This suggests that the existence of a single transaction is not sufficient of itself to constitute a market for the purposes of Level 1 of the IASB/FASB fair value hierarchy.[84]

244. It seems to be commonly believed, however, that the transaction price of an asset or liability arrived at between a buyer and a seller dealing at arm's length should be presumed to be its market price at the date of the transaction (that is to achieve Level 1 of the IASB/FASB fair value hierarchy), unless there is convincing evidence to the contrary.[85] Supporters of this view argue that a transaction price meets the definition of fair value — that is, it is the amount for which the asset or liability could be exchanged between knowledgeable, willing parties in an arm's length transaction — unless there is clear evidence that one or more of these conditions is not met. These conditions would not be met, for example, if it is apparent that the transaction occurred under duress rather than between willing parties, was between related parties, or was part of a set of transactions that would have occurred at a different price if not for those other

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[83] For example, see The Royal Institution of Chartered Surveyors, *Valuation of Owner-occupied Property for Financial Statements,* paragraph 2.1; *Appraisal Institute Response: FASB Fair Value Measurements,* page 9; and International Valuation Standards Committee, International Valuation Standard 1, "Market Basis of Valuation", paragraphs 3.2.7 and 6.6, in *International Valuation Standards.*

[84] The Joint Working Group of Standard Setters in *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items* arrived at a somewhat similar conclusion in identifying certain situations in which "prices are not determined by normal market interactions", or when there are infrequent transactions. In these situations, it concluded that the observed prices should not be used "as the primary basis for determining fair value". See its paragraphs 88-89 and 332-334. It did not, however, address or define the concept of a market.

[85] "Transaction price" means the price excluding any transaction costs (defined at paragraphs 193-200).

transactions.[86] It is also conceivable that there could be situations in which it is evident that one of the parties did not meet the condition of being knowledgeable, perhaps, for example, if a different market price could be observed. But barring evidence of such exceptions, the argument is that in an open, free enterprise economy, the prices of all goods and services are set on the basis of supply and demand conditions by competing participants who can be expected to be knowledgeable about the products and services in which they are transacting. Individual buyers and sellers should have access to information about the rates of return for risk available in the marketplace and, thus, it is argued, should be expected to negotiate prices that are consistent with these market expectations.

245. CON 7, paragraph 27 advances this position:

> "A transaction in the marketplace — an exchange for cash at or near to the date of the transaction — is the most common trigger for accounting recognition, and accountants typically accept actual exchange prices as fair value in measuring those transactions, absent persuasive evidence to the contrary. Indeed, the usual condition for using a measurement other than the exchange price is a conclusion that the stated price is not representative of fair value ...." [footnote omitted]

246. This is a pragmatic position based on practice, rather than a statement of principle. It implicitly presumes that individual buyers and sellers are generally rational, willing and knowledgeable parties dealing at arm's length, and that any exceptions from market value will be clearly evident. The question is whether these presumptions are necessarily justified. In principle, a transaction price exchanged by an entity for an asset or liability is the basis of the historical cost of that asset or liability — that is, ignoring any transaction costs, it is the fair value of the consideration given to acquire the asset or received for incurring the liability. The fair value of the asset or liability on initial recognition could differ from its transaction price. Every day people get bargains or pay more than fair value for goods and services. Individual transaction prices may exceed or be less than fair value because of ignorance, inadequate research, convenience, or disadvantageous bargaining positions, among other reasons. In addition, a difference would arise if a contract was entered into to acquire an asset or incur a liability at a fixed price prior to the date of its initial recognition and the fair value price of the asset or liability changed between the contract date and the date of its initial recognition.[87]

247. In many situations it will be reasonable to assume that the transaction price exchanged for an asset or liability reasonably reflects its market value on the transaction date. For example, amounts paid for common, publicly traded goods and services would normally be readily seen to be consistent with observable prices in the marketplace. The concern is with respect to an asset or liability for which there is no market and no observable basis for supporting or rebutting the presumption that the transaction price equals its fair (market) value on initial recognition.

248. This concern may be illustrated by an example. Suppose that entity A is bargaining to acquire a unique asset, say a private operating subsidiary of entity B. A's estimate of the maximum amount that it would be prepared to pay will presumably be based on its private, entity-specific information and expectations. It might expect certain synergies with its present operations or believe that it has superior expertise to others in that business. Suppose that the maximum amount that A is prepared to pay is 1.5 million. B, on the other hand, may have a much lower estimate of the value of the subsidiary based on its knowledge and expectations. It might not be as optimistic as A, and it might have lower expectations as to the synergies that it can extract from the asset. Suppose B estimates a value of 0.5 million and would be prepared to sell for any

[86] These are examples cited in the FASB Exposure Draft, *Fair Value Measurements,* paragraph 23d.

[87] This possibility and its implications are discussed at paragraphs 410-415.

 

price in excess of that amount. A and B will not be privy to each other's expectations, information bases and expertise, although they may try to learn as much as possible about them to improve their respective bargaining positions. What is the fair value of this asset? Suppose A acquires the subsidiary for 1.35 million in cash. Should this be considered to be the fair value of the operating subsidiary on its initial recognition by A?

249. What characterizes the unique asset illustrated by the business acquisition example above is that there may be no real possibility of obtaining persuasive evidence with respect to whether the exchange price is, or is not, its fair value. Entity A may have made a bargain purchase. Alternatively, its entity-specific expectations for synergies may have had no basis in reality but may have been unrealistically optimistic. The exchange price of 1.35 million is the asset's historical cost to A, and this may be all that can be reliably observed on initial recognition in this case.

250. This is not to say that the exchange price may not be the most appropriate basis for measuring the asset on initial recognition in this situation. The essential question is whether the transaction price in situations like this should be purported to be the fair value of the asset or liability (that is, qualify at any levels of a fair value hierarchy) on the measurement date, or whether all that can be asserted is that it is the price paid (historical cost).[88]

251. Some argue that, if it is agreed that the most relevant measurement basis on initial recognition is fair value, the closest proxy or substitute available should be described as "fair value", no matter how far short of the fair value (market) objective the actual measurement may be. Others reject this view. They believe that a measurement should be described in terms of what was actually achieved, and not purport to be more than that.

252. The above example illustrates that accounting measurement on initial recognition has sometimes fallen back on an assumption that fair value is reliably represented by another accounting basis (in this case, historical cost) in order to resolve an indeterminacy. The problem with describing the exchange price (historical cost) as fair value on initial recognition of unique assets or liabilities for which there is no market or alternative source for estimating fair value is that it creates an expectation that the amounts faithfully represent the properties of market value when there is insufficient evidence to support this expectation and there are potentially large, but indeterminate, ranges of fair value measurement uncertainty.

*Level 2*

253. Level 2 may be defined in the following terms:

> If observable market prices for identical assets or liabilities are not available on the measurement date, fair value shall be estimated using observable market prices for similar assets or liabilities adjusted as appropriate for differences, whenever that information is available.

[88] Other situations involving unique assets or liabilities that may be measured on initial recognition at their exchange prices, with no real possibility of obtaining independent evidence of fair value, may include some specialized or self-constructed items of plant and equipment, and possibly some liabilities for unique warranties and other similar obligations.

254. There must be relevant and reliable bases for adjusting an observable market price for differences between value-affecting properties of the market traded assets or liabilities and the asset or liability being measured. This requires that price adjustments reliably reflect the adjustments that market participants could be expected to make. If reliable adjustments are not possible, then reference must be made to Level 3.[89]

255. An example is a unit of account issue involving whether adjustments should be made for block discounts or premiums that can arise when the observable market price for an item (for example a company's shares traded on a public exchange) reflects normal trading blocks that are smaller than the block of shares acquired by the reporting entity. In this case, the large block may trade at a discount per share from the observable market price for smaller blocks, possibly reflecting a lower level of liquidity or, alternatively it might trade at a premium if the block could affect control of the company. Reasoning from the proposition in paragraph 166, the fair value of the acquired block on initial recognition should reflect the properties the fair value of that block, and not be adjusted to the observable market price of smaller trading blocks (see also paragraphs 170-171).

256. Some other issues relating to the application of Level 2 may be illustrated by another example. Suppose that an entity acquires another entity that has work-in-process inventories required to be measured at fair value on the acquisition date. Suppose that the finished good has an observable market price. Under Level 2 of the hierarchy, the fair value of the finished good would be used as the basis for estimating the fair value of the work in process, with adjustment for the differences, assuming that the finished good can be considered to be a similar asset to the work in process. A number of approaches might be taken to estimating the market price effect of differences. A common approach is to assume that the entity's estimate of the costs to complete and sell the work in process (often with the addition of an estimated profit margin) reasonably represent the adjustment the market could be expected to make. This results in adopting a net realizable value measurement basis, with its dependence on entity-specific assumptions and expectations. This is not necessarily the adjustment that the market would make. Market participants may be expected to build in estimates of the likelihood of successful completion and there may be differences in estimations of costs of completion and in the profit margin demanded in the marketplace for equivalent risk. The question is whether the adjustment that the market could be expected to make is capable of sufficiently reliable estimation in particular circumstances, or whether an entity-specific accounting measurement would have to be substituted for fair value.

*Level 3*

257. Level 3 may be defined in the following terms:

> If the conditions of Level 1 or 2 cannot be met, fair value shall be estimated using other valuation techniques. Valuation techniques shall be consistent with the objective of estimating fair value and incorporate assumptions that marketplace participants would use whenever market-based information is available without undue cost and effort. If market-based information is not available without undue cost and effort, an entity may use as inputs its own assumptions as a practical expedient.

258. Fair value estimates may be made using measurement techniques or models that are accepted to reasonably replicate the process that market participants could be expected to use to price assets and liabilities. Such models or techniques are based on accepted market pricing principles, including present value methodologies and concepts of probability and risk. There

[89] Note that, in accordance with the proposals of this paper, the reliability of such price adjustments would take into account whether relevant and reliable information about the nature and extent of their measurement uncertainty could be provided (see paragraph 220).

 

are well-established models for measuring the fair value of many types of options and other derivatives, as well as certain primary financial instruments such as loans receivable and payable.[90] As an example, a reliable estimate of the fair value of notes receivable on initial recognition normally may be made by discounting the contractual payments using the observable market rate of return for the same term and commensurate credit risk. This present value approach is well accepted and has been in place in accounting standards and practice in a number of jurisdictions for many years.[91] In many cases, fair value pricing models have been developed by experts in finance and by financial institutions in creating instruments to manage risks. Such instruments must be capable of reliable fair value measurement to enable them to serve this purpose. In recent years, most accounting standard setters have concluded that the large majority of derivatives are capable of reliable fair value estimation using models when observable market prices for them are not available.[92]

259. Fair value measurement models have been developed for some significant contractual assets and liabilities and, in particular, for various types of financial instruments. There seem to be fewer prospects for developing reliable fair value measurement models for non-contractual assets that are inputs to revenue-generating processes. In addition, some difficult valuation modeling issues arise in respect of certain liability provisions (for example, asset retirement, pension, and life insurance obligations).

260. Non-contractual assets that do not generate cash flows in and of themselves, but contribute along with other inputs to a cash-generating process, can present significant fair value measurement problems when there are no observable market prices for identical or similar assets. An example is an item of equipment that is configured for a specialized use in a cash-generating process. If one looks to its realizable value in the marketplace, it might be concluded that the market sees no value in the specialized equipment beyond its value as scrap, or as the market value of unspecialized equipment less estimated costs to restore the specialized asset to its original unspecialized condition. This view presumes that the market does not see the specialized equipment as having any value in use in the entity's revenue-generating process. This would not seem to be a reasonable presumption, unless there is convincing publicly available information supporting it (which might be the case if it is evident that the equipment could not be productively used in the revenue-generating process, or if a reliable fair value estimate of the process as a whole is so low that the value in use of contributing input assets is minimal). Lacking such evidence, it may be concluded that the "knowledgeable parties" condition necessary to the existence of a market (see paragraphs 240 and 241) is not met for this specialized asset on the measurement date.

261. In other words, it may be reasoned that properties affecting the equipment's fair value have been fundamentally changed by its specialization, so that the basis for its fair value lies in its value in use in the cash-generating process, rather than in market prices for unspecialized equipment or scrap. Since there is no observable market price for this specialized equipment, one would expect to look for a model under Level 3 of the hierarchy as set out above. This would often be a present value model, based on discounting estimated cash flows to be generated by

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[90] See, for example, discussion of models for estimating the fair value of loan assets in Joint Working Group of Standard Setters, *Draft Standard and Basis for Conclusions — Financial Instruments and Similar Items,* paragraphs 359-363 and 4.36-4.38.

[91] Standards in the United States have, since 1971, required that the contractual cash flows of notes receivable and payable that do not bear interest at realistic market interest rates on initial recognition be discounted at reasonable current market rates (see Accounting Principles Board Opinion No. 21, *Interest on Receivables and Payables*, paragraphs 12-14). See also IAS 39, paragraph AG 64.

[92] In particular, see IAS 39 and FASB Statements 133 and 138.

the contribution of the specialized equipment to the cash-generating process. But this model requires attributing the estimated net cash flows to be generated by the process as a whole to specific inputs. Such attribution is subject to a fundamental indeterminacy, because it requires a one-to-many allocation (see paragraph 214).

262. One might then question whether the unit of account should be at a higher level of aggregation. This was discussed at paragraphs 157-161, where it was proposed that, pending further study beyond the scope of this paper, "... the appropriate unit of account for non-contractual assets on initial recognition is the lowest level of aggregation at which an identifiable asset is ready to contribute to the generation of future cash flows". If this is accepted, then it would seem necessary to conclude that the fair value of a non-contractual asset that is one of many inputs to a cash-generating process cannot be reliably estimated using a present value model. Other possibilities, using multiple valuation techniques employed by professional valuators, are explored at paragraphs 269-275.

263. The reliability of fair value estimates using models is dependent not only on how well a model replicates accepted market pricing processes, but also on the reliability of its data inputs. A fair value model should be expected to be based on inputs and assumptions that marketplace participants would use. As an example, data inputs required by accepted stock option pricing models include the current price of the underlying stock, the volatility of that price, the effects of vesting provisions, and the risk-free interest rate for the expected life of the option. The market prices of certain of these inputs can be readily observed. For example, the risk-free interest rate can be derived from the observable prices of government bonds, and the current price of the underlying stock can be observed if it is traded in a market. The market's measure of some other inputs may not be so readily determinable, for example, the effects of vesting provisions and the appropriate measure of volatility.

264. In some situations, sources or measures of data inputs may be established that, while not directly derived from observable market prices, are generally accepted not to compromise unduly a model's estimate of fair value. These may be subject to some range of misestimation. For example, the measure of volatility on pricing an option is commonly based on past volatility, which may not be fully indicative of current market expectations of future volatility. The consistency of such data with market expectations requires careful evaluation in the context of the particular circumstances,[93] and disclosure of the basis of such data and underlying assumptions, and the extent of measurement uncertainty, is important when there is significant uncertainty.

265. Fundamental questions may arise in applying the "knowledgeable parties" condition underlying the concept of fair value (see paragraphs 109, 183-187 and 240-241). In particular, it may be difficult or impossible to determine what information is available to market participants. Further, there would seem to be no practical basis for pricing information asymmetry. Thus, absent observable market prices, accepted models seem typically to assume that there is no information asymmetry, that is, to assume that all parties have access to the same information and that fair value is not affected by concerns that some parties may have private price-relevant information advantages. The validity of this assumption, and whether there may be any viable alternatives, would seem to warrant in-depth study, in particular, to establish whether this is a significant limitation of fair value models, or whether it may be a reasonable assumption within certain modeling contexts.

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[93] It is important to consider the overall effect on a measurement of data inputs that may individually not be capable of corroboration with market expectations, but may have effects that offset one another so that, taken together, they may be considered to reasonably approximate market expectations.

266. In some situations, when there is no available information as to market expectations with respect to a material input, the only recourse may be to use estimations reflecting the entity's expectations. The above description of Level 3 indicates that, when information about assumptions that marketplace participants would make is not available without undue cost and effort, an entity may use its own assumptions. The general proviso in using such entity-specific assumptions, as set out in CON 7, paragraph 38, is that there be "... no contrary data indicating that marketplace participants would use different assumptions." It seems unlikely that there could often be any hard evidence of such contrary data, given that the reason for using entity data and assumptions is that there is no reliable information as to market expectations. In other words, there may often be no effective basis for validating or refuting whether entity expectations are a reasonable proxy for market expectations. Thus, this "no contrary market data" proviso would seem likely to be an empty condition in these situations. The reliability condition would not be met if an estimate's representational faithfulness to market expectations cannot be verified and relevant and reliable information about the extent of measurement uncertainty cannot be provided.

267. Since entity-specific estimates and assumptions that do not coincide with market expectations are inconsistent with the fair value measurement objective, this paper proposes that:

> *A measurement model cannot be considered to achieve a reliable estimation of the fair value of an asset or liability if it depends significantly on entity-specific expectations that cannot be demonstrated to reliably represent market expectations.*

268. This is not to suggest that entity-specific data and assumptions may not be appropriate substitutes for market data when market data are unavailable. Some significant assets and liabilities may be capable of measurement on initial recognition only on the basis of models using significant entity data that cannot be demonstrated to be consistent with market expectations. These may include, for example, liability provisions for asset retirement obligations, claims arising from lawsuits, and liabilities arising under defined benefit pensions plans. The basic point is that, if a measurement is used that is a more limited representation than fair value, it should be described in terms of what it is, not purported to be "fair value". It is proposed that such descriptions should focus on the valuation technique(s) employed and the bases of key assumptions and data sources. Information of this nature is commonly required now in standards for the measurement and disclosure of liability provisions related to, for example, insurance and defined benefit pension plans. It is further proposed that material entity-specific assumptions and data sources be identified, and that there be a caution that, while the estimate reflects market expectations to the extent practicable, its significant reliance on entity expectations means that it does not necessarily represent the fair (market) value of the asset or liability on the measurement date.

#### Professional Valuations And Property Valuation Standards

269. An entity may use a professional valuator to estimate the fair value of an asset. A professional valuator may have extensive knowledge and expertise with respect to estimating the market values of particular types of assets. Such valuations may meet the fair value measurement conditions, but it would not seem sufficient to accept that this is so without assurance that the measurement techniques, assumptions, and data inputs do meet these conditions.

270. Professional valuations have been used in financial accounting in valuing property (including land, plant and equipment).[94] There are a number of recognized property valuation organizations throughout the world. Most are members of the International Valuation Standards Committee (IVSC) whose principle objective is: "To formulate and publish, in the public interest, valuation Standards for property valuation and to promote their worldwide acceptance...."[95] The IVSC has developed General Valuation Concepts and Principles, Code of Conduct, International Valuation Standards, International Valuation Applications, and Guidance Notes. The IVSC first published standards in 1985 and they have been revised, extended and updated on a continuous basis since then. The standards define "market value" and "non-market value" valuations and require their clear distinction. The IVSC concept of "market value" seems to be generally consistent with the concept of fair value proposed in this paper. The Introduction to IVSC *International Valuation Standards* states that:

> "Market-based valuations are developed from data specific to the appropriate market(s) and through methods and procedures that try to reflect the deductive processes of participants in those markets." (paragraph 4.1.3, page 76)

271. IVSC standards describe three valuation approaches that are commonly applied, and their results reconciled, by property valuators in estimating the market value of property. These are:

(a) Cost approach. This involves estimating the current cost of acquiring or constructing a new property with equal utility to the subject property, or adapting an old property to the same use.

(b) Sales comparison approach. This involves considering sales of similar or substitute properties and related market data.

(c) Income capitalization approach. This involves estimating the present value of future cash flows, based on a study of historical income and expenses of a property (for example, a rental property) to attempt to reflect market expectations.

272. It is intended that all three approaches be employed to the extent relevant to a particular property: "All three approaches are intended to develop an indication of value, but the final value conclusion depends on consideration of all data and processes employed and the reconciliation of the value indications derived from different approaches into a final estimate of value."[96] The IVSC does not specify how this reconciliation is to be done, but stresses: "The Valuer must use judgement when determining the relative weight to be given to each of the value estimates during the Valuation Process."[97] Thus, there is much reliance on the judgment, knowledge, and expertise of the valuator.

273. The standards state that:

> "Where there is sufficient market data to support the valuation, Market Value is derived. In other circumstances, where there is insufficient market data or special instructions have been given, the result will be Non-Market Value."[98]

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[94] Such valuations may be used in estimating the fair value of property, plant and equipment of an acquiree on its acquisition in a business combination, and under the "allowed alternative" of IAS 16 for revaluing property, plant and equipment. IAS 16 states that such a value is "... determined by appraisal normally undertaken by professionally qualified valuers." (paragraph 30)

[95] International Valuations Standards Committee, *International Valuation Standards,* page 3.

[96] International Valuation Standards Committee, Guidance Note No. 1, "Real Property Valuation", paragraph 5.14, in *International Valuation Standards.*

[97] International Valuation Standards Committee, Guidance Note No. 5, "Valuation of Personal Property", paragraph 5.11.2.2, in *International Valuation Standards.*

[98] International Valuation Standards Committee, Guidance Note No. 1, "Real Property Valuation", paragraph 5.16, in *International Valuation Standards.*

 

This statement seems to be consistent with the proposed conclusion in paragraph 267 of this paper.

274. The FASB Exposure Draft, *Fair Value Measurements,* proposes that Level 3 estimates be based on the results of multiple valuation techniques consistent with "the market approach, income approach, and cost approach" whenever the information needed to apply these techniques is available without undue cost and effort.[99] The Exposure Draft observes that the use of multiple valuation techniques is consistent with generally accepted valuation practices.[100] The FASB's Basis for Conclusions includes the following explanation:

> "The Board concluded that because different valuation techniques tend to provide independent indications of fair value, an estimate based on the results of multiple valuation techniques is likely to be more reliable than an estimate based on the results of a single valuation technique. Accordingly, the results of those valuation techniques (the respective indications of fair value) should be evaluated, and significant differences explained, as a basis for the resulting estimate." (paragraph C57)

The proposed FASB standard, and supporting examples in paragraphs B10-B16, indicate acceptance of significant reliance on judgment in applying these three valuation techniques and reconciling them to estimate fair value.

275. Property valuation is a field of knowledge and expertise apart from traditional financial accounting, and is based on standards that have been developed by a separate body outside the accounting standard setting process. It is proposed that accounting standard setters should obtain a thorough understanding of IVSC standards, and their application, to be in a position to evaluate how and when they may be accepted to meet financial reporting purposes. This paper proposes that a project be undertaken by the IASB and national standard setters with the IVSC to examine the IVSC body of standards and practice in light of financial accounting measurement objectives. This joint study might result in some expansion or increased specification of IVSC standards to better meet financial reporting purposes and, possibly, in improved specification of accounting measurement objectives in respect of property. The result should be an improved understanding of the extent to which it is feasible to achieve reliable estimates for accounting purposes of the fair value, or best substitute, of various forms of property. There could then be a fully informed basis for using property valuations carried out on the basis of established standards by qualified valuators possibly to provide the equivalent of the models that have been developed for estimating the fair value of many types of financial instruments.

### *Summary*

276. In summary, fair value estimates are subject to potentially large ranges of indeterminacy in some relatively common situations arising on the initial recognition of assets and liabilities.

277. These problems have been resolved, in the sense of resolution to a single amount, in a variety of ways that can compromise fair value measurement. Some of these problems might be overcome in time by research that enables a better understanding of market pricing processes and assumptions. For example, the fair value of particular forms of non-traded options might be subject to more reliable quantification through research on market pricing processes and related finance literature. In addition, better understanding and use of professional valuation

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[99] See FASB Exposure Draft, *Fair Value Measurements,* paragraphs 21-23, examples at paragraphs B10-B16, and paragraphs C42 and C56-C61. These three approaches seem to be consistent with the IVSC "sales comparison", "income capitalization", and "cost" valuation approaches.

[100] The Exposure Draft (paragraph C42) cites the Appraisal Foundation's *Uniform Standards of Professional Appraisal Practice*.

standards and expertise may enable improved estimates of fair value, or best substitutes, for property, and perhaps other assets and liabilities. However, some potentially major areas of fair value indeterminacy seem to be intractable, in particular, in respect of many specialized non-contractual assets.

278. None of this is to suggest that the fair value objective lacks relevance for the measurement of assets and liabilities on initial recognition, or that other measurement bases are necessarily better as the general objective. Such a possibility cannot be addressed without comparative in-depth consideration of the other measurement bases.

279. This paper concludes, based on the analysis in this section, that fair value cannot be estimated reliably in some relatively common situations. It is proposed that, if fair value is determined to be the most relevant measurement of assets and liabilities on initial recognition, then, when it is not capable of reliable estimation, the objective should be to select the best substitute that can be measured with adequate reliability. Further, it is suggested that, if other measurement bases are used as substitutes for fair value and there is some degree of flexibility in how they may be interpreted or applied, efforts should be made to adopt methodologies that are as consistent as possible with the fair value measurement objective. Consideration of these possibilities requires a thorough understanding of the measurement attributes of other measurement bases.

280. In addition, this paper proposes that measurement substitutes for fair value be clearly described in terms of what they are, not as "fair value"(see paragraph 268). Possible measurement substitutes for fair value are discussed in the following sections.

## Historical Cost

281. The working definition of historical cost (see paragraphs 77-80) is:

> Assets are recorded at the fair value of the consideration given to acquire them at the time of their acquisition. Liabilities are recorded at the fair value of the consideration received in exchange for incurring the obligations at the time they were incurred.

### *Relevance*

*Assets*

282. The fair value of consideration given to acquire an asset (its historical cost as defined above) does not purport to measure the value received. In other words, historical cost, as defined above, gives no consideration to recoverability. It is only a measure of the amount expended. It has been observed that a basic property of an asset is that it represents future economic benefits expected to flow to the entity, and that the cash-equivalent expectations attribute of an asset is a primary focus of accounting measurement (see paragraph 48). The historical cost of an asset does not have this attribute, and therefore it must be supplemented by some additional measure of recoverable value to meet the "asset" test.

283. Some argue that a presumption of recoverability is implicit in the historical cost measure of an asset, because it can be generally presumed that an entity will not pay more for an asset than it believes to be its value to the entity from its use or sale. They reason that an entity must believe that an asset's value to the entity on initial acquisition will equal or exceed the amount paid for it, or the entity would not have acquired it. This paper does not dispute that this belief is likely to underlie asset acquisitions, but this belief does not of itself provide a sufficient basis for presuming that historical cost is a measure of value received. The belief of asset cost

 

recoverability on the part of the acquiring entity may reflect entity-specific expectations that may or may not be reasonable, and may or may not be supported by observable evidence. A presumption of value received requires independent substantiation by reference to some acceptable measure of its recoverable amount.

284. As a practical matter, it may be reasonable to accept that the fair value of consideration given to acquire an asset is recoverable at the date of initial recognition absent evidence to the contrary. But this would be a practical expedient to avoid undue cost and effort to substantiate recoverability in situations in which there is no reason to doubt it.[101] Such an expedient presumption does not change the fact that historical cost must be supplemented by a recoverability condition if it is to have a claim to represent future economic benefits (cash or cash-equivalent flow). This requires agreement on the recoverability measure that should be used in assessing this.

285. Thus, historical cost, as defined above, does not stand on its own as an asset measurement basis. This is evidenced by acceptance that two conditions related to asset recoverability must be met to justify recognition and measurement in financial statements:

(a) "An item that meets the definition of an element should be recognised if: (a) it is probable that any future economic benefit associated with the item will flow to or from the entity ...."[102] The fact that a cost has been incurred is not sufficient justification for the recognition of an asset because not all costs result in probable future benefits.

(b) Further, it is an accepted principle of accounting that the historical cost of an asset should only be recorded to the extent that it can be considered to be recoverable, which requires reference to a concept of impairment and some measure of recoverable amount. (The measurement of impaired assets is to be examined in a subsequent stage of this project — see paragraphs 16-17.)

286. Some may wish to redefine historical cost within a broader "historical cost-based" model in which an asset that meets the first recognition condition above is measured on initial recognition at the lower of cost and an acceptable measure of its recoverable amount. The objective on initial recognition of an asset would then be to reflect its recoverable cost. This is not historical cost as defined above, however, but a combination of asset measurement bases — the lower of historical cost and some measure of recoverable amount. Although a lower of historical cost and recoverable amount measurement puts a ceiling on the reported value of an asset, it cannot purport to represent value received, but only that the asset is not worth less than the recorded amount.

287. In contrast, fair value does purport to measure the value of an asset — its value in the marketplace. Fair value stands on its own as the value that could be exchanged between knowledgeable, willing, arm's length parties. As a result, the separate conditions set out in paragraph 285 are not applicable, because they are incorporated within fair value. More specifically:

(a) The above-noted condition for the recognition of an asset — that it is probable that a future economic benefit will be received — has no relevance to a fair value measurement. This is because the probability of future benefit is reflected in the measurement of fair value. For example, a particular financial option may have little

[101] A presumption that historical cost is recoverable absent evidence to the contrary may be justified on the expectation that there will be observable evidence in such cases. This may be contrasted with the paper's proposal to reject a presumption that an exchange amount equals fair value on the transaction date absent persuasive evidence to the contrary, because (as explained in paragraphs 243-252) there will be significant situations in which there is no observable basis for determining whether or not the contrary condition exists.

[102] IASB *Framework*, paragraph 83.

likelihood of becoming "in the money", but it has a fair value at which it is traded in the marketplace. Any item that has a positive fair value to the acquirer on initial recognition (that is, has an exchange value in the marketplace) has a recognizable (observable) asset value.

(b) Further, the fair value of an asset on initial recognition needs no additional assessment of recoverable amount, because the fair value of an asset is the market's measure of its recoverable amount.

288. In summary, fair value has a vital property (that is, as a measure of asset value received on initial recognition) that is missing in historical cost.

*Liabilities*

289. A parallel comparison may be made between the historical cost and fair value of a liability on initial recognition. On the historical cost basis, a liability is measured on initial recognition at the fair value of the consideration received in exchange for incurring the obligation. This amount may not be a reasonable measure of the amount owing, because there is not necessarily an equivalent relationship between the amount of consideration received for incurring a liability and the amount of the probable sacrifice of future benefits that the liability entails. Entities may incur liabilities without receiving any consideration — for example, a liability incurred as a result of a lawsuit, or arising as a result of an accident causing environmental damage. In other words, the historical cost objective applied to liabilities does not purport to measure the value of the obligation incurred, only the fair value of the consideration received. It is now well recognized in practice that it is not appropriate to measure liabilities on the basis of the fair value of the consideration received when this does not reflect a reasonable measure of the amount owing.

290. Fair value, on the other hand, does purport to measure the value of liabilities in the marketplace on the measurement date, for reasons parallel to those set out in respect of the fair value of assets at paragraph 287.

291. In summary, historical cost does not purport to represent an important dimension (value received or owed) that is purported to be represented in fair value. Historical cost may be expected, then, to have more limited information value and decision usefulness — that is, to be a less relevant measurement basis — on initial recognition of assets and liabilities than fair value in all situations in which fair value can be reliably determined.

*Some Additional Relevance Considerations*

ENTITY-SPECIFIC IMPLICATIONS

292. An important tentative conclusion of chapter 4 is that the market (fair) value measurement objective is more relevant than entity-specific measurement objectives on initial recognition of assets and liabilities. What implications does this tentative conclusion have for historical cost? Historical cost purports to represent the fair value of consideration exchanged in an arm's length transaction. It is, nevertheless, an entity-specific measurement in the sense that, if the historical cost (or lower of historical cost and recoverable amount) of an asset differs from its fair value, there must be some explicit or implicit entity-specific expectations as to its recoverable amount that differ from the expectations of the marketplace. For example, if the

 

recorded historical cost of an asset is 450, while its fair value is 400, the entity must have a higher expectation of its recoverable amount than does the market.[103] The historical cost of an asset (or a liability) is, therefore, an entity-specific measurement when it differs from fair value.

THE COST-REVENUE MATCHING OBJECTIVE

293. The relevance of historical cost-based accounting has traditionally been premised on a cost-revenue matching objective. It is important to consider this objective and its implications for the relevance of historical cost, in comparison with fair value, for measurement on initial recognition of assets and liabilities. The cost-revenue matching objective has its roots in the economic premise that sacrifices must generally be made (that is, costs must generally be incurred) to achieve benefits (that is, revenues). An essential objective of business entities can be envisaged in this way. Business entities are set up with the objective of transforming various inputs of goods and services into outputs that can be sold for revenues that exceed the costs of the inputs used to achieve them. The historical cost of an input to a future revenue-generating activity represents the investment or sacrifice made to achieve revenue benefits. The traditional accounting objective has been to recognize the cost of an asset as an expense when the revenues to which the asset is considered to contribute are recognized. Net income is then measured on the basis of matching costs with related revenues.[104] Defining and measuring the historical cost of assets on initial recognition has been considered to be the first essential step in this matching process.

294. This traditional matching objective has undergone significant changes over the years. In particular, as noted earlier, it is now well accepted in principle that an input must meet the definition of an asset to warrant capitalization of its cost, and that its cost should be carried forward only to the extent that it can be considered to be recoverable from future cash-generating activities or sale. Further, the marketplace is the final arbiter in determining the recoverable amount of an asset, through the sale of the asset in the marketplace or through sales in the marketplace of goods or services to which the asset's use contributes.

295. The measurement of an asset on its initial acquisition at its market (fair) value provides an initial matching point between the marketplace's value of the asset and its historical cost. Any profit or loss on acquisition is the result of matching the benefit (the market value of the asset on acquisition) against the sacrifice made (the cost expended) to acquire or create that asset. Such profit or loss reflects the market measure of the effectiveness of the asset acquisition or creation activity, and no expected entity-specific advantages or disadvantages are carried forward to future periods. To carry forward the historical cost of an asset that differs from its fair value on initial recognition results in a less informative matching in later periods when the asset is ultimately realized (through sale or use). This is because the reported profit or loss at that future time will not distinguish the net income effects of activities relating to the acquisition or creation of the asset from the net income effects of subsequent activities.

296. In summary, it is reasoned that the cost-revenue matching objective is not lost, but is enhanced, by the measurement of assets at fair value rather than historical cost on initial recognition.

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[103] Such a difference might arise, for example, as a result of transaction costs being included in historical cost, but not in fair value, or if the sum of the costs allocated to a self-constructed asset exceed its fair value.

[104] This matching objective is explicitly recognized in most conceptual frameworks. See, for example, IASB *Framework*, paragraphs 95-96.

DECISION USEFULNESS

297. Conceptual frameworks of the IASB and national standard setters generally identify decision usefulness as the primary objective of financial statements (see paragraphs 30 and 31). Further, they give prominence to usefulness for predictive purposes and to feedback value in relation to predictive purposes (see paragraphs 37-39).

298. Since the historical cost of an asset does not purport to measure value received, it has no defined expectations for the ability of an asset to generate future cash or cash equivalents. It is not a forward-looking measurement basis. Thus it may be expected to have limited predictive value in and of itself. Usefulness for predictive purposes would seem to depend on whatever recognition and recoverable value conditions are applied, and on entity-specific expectations for the use or sale of the asset. A corresponding analysis may be made of the historical cost measurement of a liability.

299. The recorded cost of an asset to be used in a business enables a determination of the total amount to be charged to expense in future periods, which facilitates the prediction of future reported net income. However, this does not in itself have any necessary implications for the ability of the entity to generate future cash and cash equivalents. Further, this is not a unique attribute of historical cost, since any measurement of an asset on initial recognition defines the amount that will ultimately be charged to expense on the use or sale of the asset.

300. In comparison, the fair value of an asset on initial recognition embodies market expectations for the future recovery of the fair value plus the rate of return available in the marketplace for assets of equivalent risk. A parallel statement may be made in respect of the fair value of a liability. Further, the potential volatility of observable market prices is capable of statistical analysis (for example, value-at-risk and sensitivity analyses) to help users evaluate the risk and volatility dimensions of reported fair value amounts, given information about the nature of the assets or liabilities and their inherent risks.

*Summary — Conclusion on Relevance*

301. *This paper proposes, based on the foregoing analysis, that fair value has a significant value dimension missing from historical cost (and also from the lower of historical cost and recoverable amount measurements). As a consequence, this paper concludes that historical cost (and the lower of historical cost and recoverable amount) is less relevant than fair value on the initial recognition of assets and liabilities.*

302. The above analysis of historical cost in comparison with fair value is not exhaustive (for example, it does not address each of the criteria set out at paragraphs 28-54). It would be a very major undertaking to examine thoroughly the extensive literature on the historical cost-revenue matching model, and all the arguments that might be raised. Such an examination is beyond the scope of this preliminary investigation. Rather, this paper has attempted to identify and focus on certain primary considerations, which, it is proposed, strongly support the above conclusion. It seems reasonable to expect that additional analysis would serve to provide further support for it.

### *Historical Cost as a Substitute for Fair Value on Initial Recognition*

303. This paper proposes, in paragraph 202, that the most relevant measurement basis should be selected when that basis can be measured with acceptable reliability. Accordingly, on the basis of this proposal, fair value should be selected over historical cost for measurement of assets and liabilities on initial recognition when fair value can be estimated with acceptable reliability. Historical cost would then be considered only as a possible substitute for fair value on the initial recognition of an asset or liability when fair value is not measurable with acceptable reliability.

 

304. Although historical cost lacks important attributes of fair value, it does have certain significant attributes that have led it to be accepted as a relevant measurement basis on initial recognition. The essence of the historical cost measurement objective, and therefore of its relevance, lies in its representing the fair value of consideration given or received in exchange for an asset or liability. As such, it is a valid measure of the economic sacrifice made to obtain an asset, or the economic benefit received for incurring a liability. It is proposed that the historical cost of an asset or liability can be accepted to have sufficient relevance to be a possible substitute for fair value on initial recognition when fair value cannot be estimated with adequate reliability — provided that the measure of historical cost is a reliable representation of the fair value of consideration given or received, and it is subject to reasonable supplementary conditions relating to recoverability (for assets) or representation of amounts owing (for liabilities).

305. The merits of historical cost as a possible substitute for fair value on initial recognition depend on the outcome of the following analyses:

(a) Whether other measurement alternatives, or combinations of alternatives, are more relevant than fair value in some or all initial recognition situations.

(b) Whether, or under what circumstances, historical cost is the most appropriate substitute for fair value on initial recognition when fair value, or another more relevant measurement basis, cannot be determined with acceptable reliability. This assessment depends on the relevance of other measurement bases in comparison with historical cost on initial recognition, and on their reliability and the reliability of historical cost measurements.

These assessments await analysis of the reliability of historical cost below, and of the comparative relevance, and the reliability, of other identified measurement bases in immediately following sections.

*Reliability Limitations*

306. The objective of the following analysis is to understand and assess the limitations of historical cost measurement to represent what it purports to represent. More specifically, the objective is to assess:

(a) to what extent and in what circumstances historical cost is subject to estimation uncertainties or economic indeterminacies on initial recognition of assets and liabilities, and

(b) the implications of such limitations for the usefulness of historical cost measurements in comparison with other measurement alternatives.

307. The historical cost measurement objective is to reflect the fair value of the consideration paid for an asset, or received for a liability, on initial recognition. This amount is most directly and reliably measured when an asset is acquired or a liability incurred in exchange for cash or cash-equivalent consideration on initial recognition in a single transaction between a buyer and seller.

308. But historical cost measurement of an asset or liability often requires the attribution of costs to an asset or liability. When direct attribution is possible, for example, when a cost is incurred in an exchange transaction to install an asset and has no other possible attribution, then it is presumably a reliable measure of part of the historical cost of that asset. However, in many cases the determination of the historical cost of an asset or liability requires an allocation of a cost or costs amongst assets, liabilities, and expenses. Such attributions are likely to be subject to one-to-many or many-to-many allocation indeterminacy. Many examples could be cited. Among these are the unresolved, and irresolvable, debates on overhead allocations to

inventories, mining and oil exploration properties, and self-constructed assets. Arbitrary allocation problems also arise in attempting to attribute cost to assets acquired in a "basket" purchase transaction. From a liability perspective, allocation issues may arise in attributing costs that are considered to be associated with the issuance of debt or when a liability arises as part of a "basket" purchase transaction.

309. The representational faithfulness of an historical cost measurement is substantially reduced in common situations when its determination requires significant allocations. The range of indeterminacy can be very large in such situations, and it may be questioned whether the historical cost measurement objective is attainable with reasonable reliability in these situations. A decision not to allocate costs of inputs that can be considered to have contributed to the creation of an asset or liability does not resolve the problem. Zero is itself an arbitrary allocation that is no more, and perhaps less, justifiable than many other possible allocations.[105] Specified allocation rules dictated by standard setters will result in some standardization of historical cost measurements, thus improving verifiability and, possibly, comparability. However, such rules cannot improve the representational faithfulness of historical cost measurements. It is notable that the situations in which historical cost indeterminacy may be greatest — that is, in respect of self-constructed or specialized non-contractual assets — are the same situations in which fair value may not be capable of reliable estimation. Thus, it may be contended that historical cost has limited usefulness as a reliable substitute for fair value in these situations.

310. A further question with respect to the representational faithfulness of historical cost measurement arises when the cost of an asset consists of the accumulation of attributed costs that were incurred some time in the past (for example, an allocation of fixed asset overheads or interest costs of debt to a self-constructed asset). In such a case, the historical cost objective of representing the fair value of the consideration given at the time of the self-constructed asset's initial recognition[106] seems not to be met. It was observed in paragraph 79(a) that some standard setters have defined the "historical cost" of an asset in terms of the accumulation of costs that can be attributed to it without specifying that the cost represents the fair value of consideration given at the acquisition date. Others may argue that the working definition of historical cost adopted in this paper need not be altered to accommodate such allocations, but that it may be interpreted to mean the fair value of consideration given (or received) in respect of the originating asset (or liability) whose costs are being allocated to the new asset. This paper proposes not to change the working definition, but to accept the possibility of this latter interpretation and the additional degree of imprecision that it implies for historical cost.

311. An additional problem of historical cost allocation arises in respect of pre-recognition costs. This problem is evident, for example, in the historical cost recorded for assets arising from research and development and the exploration and development of mineral and oil and gas properties, and in respect of pre-construction and pre-contract costs.[107] Such costs cannot be capitalized before an asset is recognized, and most standards prohibit their retroactive

[105] The extent of the arbitrary allocation problem for the determination of the historical cost of assets in common circumstances has been specifically acknowledged in some conceptual frameworks. In particular, CON 2, paragraph 65, notes that: "If assets are converted into other assets within an enterprise, as when raw materials are converted into finished products, or buildings or equipment are constructed by an enterprise for its own use, the multiplicity of costing conventions that can be used, all within the boundaries of present generally accepted accounting principles, make it impossible to attach a unique cost to the finished asset. Thus, it may not be certain that the cost for the asset in the enterprise's records does faithfully represent its cost."

[106] Note that, as discussed in paragraphs 68, for the purposes of this paper, "initial recognition" includes any time period necessary to make an asset ready to contribute to the generation of future cash flows.

[107] See, for example, IAS 11, *Construction Contracts*, paragraph 21, and Abstract 34 of the ASB's Urgent Issues Task Force, *Pre-contract Costs*, paragraph 15(b), which preclude reinstatement of pre-contract costs that have been recognized as an expense.

 

capitalization when an asset is subsequently recognized. As a result, the amount recorded as the "cost" of such an asset is not a faithful representation of the fair value of the consideration given to create it. The rule that pre-recognition costs not be retroactively capitalized seems to be based primarily on concerns relating to practical effects rather than on any convincing conceptual basis.

312. Further, there is the "asset cost recoverability" condition, and the analogous "liability amount owing" condition, discussed at paragraphs 282-286 and 289, and the potential difficulties in arriving at reliable estimates to support whether or not these conditions are met.

313. *Thus, the determination of historical cost on the initial recognition of assets and liabilities is subject to potentially large areas of measurement uncertainty in some common situations in which historical cost is not unequivocally defined by cash or cash equivalents paid or received on the initial recognition date.*

314. Some may argue that historical cost determinations should be considered to be of acceptable reliability if they meet current standards for recognition even when there is a significant level of measurement uncertainty. Their arguments may be as follows:

(a) Historical cost determinations are at least ultimately grounded in actual transaction exchange amounts, that is, are composed of allocations of costs or fair values that have been accepted to be reliably measurable. This argument would seem to provide little comfort, however, when historical cost is subject to a large range of allocation arbitrariness.

(b) The historical cost-based model has existed for many years, and has remained in place with some adaptations to changing circumstances, despite its critics. It is supported by extensive experience in practice and familiarity, and many allocations are circumscribed to some extent by accounting standards. This is a pragmatic rather than a theoretical argument. In assessing this argument it is important to be clear on the seriousness of the allocation problem. Accountants and users of financial statements may have come to accept current accounting allocation standards and practices, perhaps without fully recognizing the extent to which representational faithfulness may be compromised by arbitrary allocations. The cost allocation problem can be deceptive, in that some allocation can always be made and may be given some seemingly plausible supporting rationale. But the fact is that no one-to-many allocation can be theoretically justified because "... inputs interact, and their interaction prevents theoretical justification from being given to the input allocations employed in financial accounting."[108]

315. Despite the seeming theoretical intractability of one-to-many allocations, it might be reasoned on purely pragmatic grounds that historical cost determinations of assets and liabilities that accord with existing standards and practices should continue to be accepted to be reliable when there is no convincing evidence that another more relevant measurement basis can be reliably applied.

*Summary Proposal*

316. *This paper proposes that the historical cost basis applied in accordance with generally accepted accounting principles can be accepted as a relevant and reliable substitute for fair value on initial recognition when fair value is not reliably estimable, if it is reasonable to assume that the historical cost amount is recoverable (if an asset) or reasonably represents the amount owing (if a liability).*

[108] Arthur L. Thomas, *The Allocation Problem in Financial Accounting Theory,* page xiii.

317. The above proposal is subject to whether other measurement bases examined later in this chapter are determined to be capable of reliable estimation and to be more relevant than historical cost for measuring assets and liabilities on initial recognition.

*Application of Historical Cost as a Substitute for Fair Value*

318. The relevance of historical cost as a substitute for fair value on initial recognition stands to be improved if it is applied on bases that are as consistent as possible with the fair value measurement objective. Evaluating historical cost allocation alternatives for measuring an asset or liability on initial recognition within the context of the fair value measurement objective could provide a fresh perspective for re-assessing some traditional cost allocation standards. It is beyond the scope of this preliminary investigation to undertake an examination of the vast body of literature and standards relating to cost allocations. However, to illustrate some of the possible implications, two examples of areas in which cost allocations might be viewed differently within the context of the fair value measurement objective may be cited:

(a) Transaction costs (as defined in paragraphs 193-200) are excluded in measuring the fair value of assets and liabilities on initial recognition. Following from this, if historical cost is used as a substitute for fair value on initial recognition, it may be reasoned that the measure of the historical cost of an asset or liability on initial recognition should also exclude transaction costs.

(b) A fundamental question arising within the historical cost model relates to whether and, if so, how interest should be capitalized on assets that take some time to make ready for use or sale. Rational market expectations as to the effects of time and attendant risks on the fair value of an asset, as evident in present value techniques for estimating fair value, may be reasoned to have implications for interest capitalization.

319. Appendix C to this paper explores on a preliminary basis some possible implications of the fair value measurement objective for assessing certain historical cost attribution standards and practices. It is emphasized that any reassessment of historical cost attributions within the context of the fair value measurement objective would not convert the measurement to fair value. It would continue to be judged against what historical cost purports to represent on initial recognition, within the conditions noted at paragraph 316.

## Current Cost — Reproduction Cost and Replacement Cost

### *Relevance*

*Assets*

320. The term "current cost" is commonly used to encompass reproduction cost and replacement cost. It is defined for the purposes of this paper as the most economic cost of an asset or of its equivalent productive capacity or service potential (see paragraph 82). The working definitions of these two concepts of current cost (see paragraphs 81 and 82) are:

> Reproduction cost — The most economic current cost of replacing an existing asset with an identical one.
>
> Replacement cost — The most economic current cost of replacing an existing asset with an asset of equivalent productive capacity or service potential.

 

### Reproduction Cost

321. The reproduction cost of an asset would differ from its historical cost on initial recognition if the most economic cost to reproduce it differs from the fair value of the consideration given to acquire it. For example, if an entity purchased or constructed an asset for 450 that could reasonably be reproduced by the entity on the acquisition date for 400, its reproduction cost would be 400. If the entity measures its assets at reproduction cost on initial recognition, it would recognize a loss of 50. Such a situation could occur if an entity's cost to construct an asset, for example a plant, included significant costs caused by avoidable inefficiencies. Also, the reproduction cost of an asset (such as one arising from research and development activities) would include any pre-recognition costs that would be necessary to reproduce the asset on initial recognition. Pre-recognition costs are not recognized on an historical cost basis as it is normally applied (see paragraph 311).

322. Reproduction cost purports only to be a measure of the amount that would be expended on a measurement date. Thus, in common with historical cost, it does not purport to measure value received, and therefore must be supplemented by an additional recoverability condition.

### Replacement Cost

323. Replacement cost has an additional, more ambitious, objective than reproduction cost. The replacement cost objective is to measure the most economic cost to replace the productive capacity or service potential of an asset, rather than just the most economic cost to reproduce the asset.

324. The replacement cost working definition reflects a concept that dates back to a period that extended from approximately the mid-1960s to the early 1980s, during which alternatives to the historical cost model were extensively studied and debated. There was widespread dissatisfaction with the historical cost-revenue matching model at that time, in large part as a result of high levels of inflation during much of this period, and concerns that historical cost measurement results in misleading income reporting under conditions of inflation or rapidly changing prices.

325. The replacement cost alternative was advocated from the perspective of maintaining an entity's productive capacity in meeting a cost-revenue matching objective. Supporters believe that net income should be reported only after providing for the most economic cost to currently replace the productive capacity used in generating revenues. This, they reason, results in an appropriate measure of performance, because it shows whether the entity is able to recover its current costs from revenues when prices change. Further, it may be considered to provide a good basis for prediction of future profitability of an entity, by excluding holding gains and losses which may not be repeated.

326. Standard setters in many jurisdictions put in place standards for the provision of supplementary replacement cost (and in some cases, general-price-level-adjusted) balance sheet and income data.[109] These standards were not well received by preparers and users of financial statements in most of these jurisdictions. Many entities found the replacement cost of their assets difficult to measure and interpret. Users generally found the data of limited usefulness, and doubted their reliability. Inflation abated shortly after these standards were issued, and most of these standards were withdrawn.[110] Some believe that these standards did not represent a fair test of replacement cost, because they were in place for an insufficient time and

[109] See, for example, FASB Statement No. 33, *Financial Reporting and Changing Prices*, 1979; and U.K. Statement of Standard Accounting Practice 16, *Current Cost Accounting*, 1980.

[110] FASB Statement No. 33 was withdrawn in 1986, and U.K. Statement of Standard Accounting Practice 16 was suspended in 1985.

generally were not rigorously applied. The conceptual basis for replacement cost has not been rigorously addressed by standard setters since the mid-1980s. In particular, there has been little consideration of replacement cost in relation to later developments in fair value measurement theory and practice.

327. The major criticisms of replacement cost voiced in the 1980s can be directly related to its objective to define an asset's service potential or productive capacity and determine the most economic cost to replace it. This objective seems most appropriate to a traditional manufacturing entity whose assets consist largely of property, plant and equipment that are not subject to rapid technological change and where significant changes in product lines are not expected. Although these conditions may have been the norm some years ago, they had diminished applicability in the 1980s, and may rarely be met in today's economic environment. Replacement cost measurement has been criticized as "what if" accounting when an entity will not, or cannot, replace its existing resources with identical assets, and thus must estimate the most economic cost of assets that it does not own. The relevance of replacement cost and the productive capital maintenance objective has been questioned, in particular, in respect of non-renewable or irreproducible assets such as oil and gas reserves or motion picture films, and in respect of monetary working capital, commodities held for trading purposes, portfolio investments, intangibles, and for plant or equipment that is subject to significant technological obsolescence.[111] In summary, many have been of the opinion that the replacement cost objective lacks relevance, or is relevant only under limited conditions to some tangible assets.

328. These criticisms have arisen for the most part with respect to measuring assets in periods subsequent to initial recognition. It may be expected that replacement cost will normally equal historical cost on initial recognition; thus, it might be contended that the measurement of replacement cost is not an issue of significance on initial recognition. However, measures of the replacement cost of an asset can differ from its historical cost, fair value, and other alternative bases on initial recognition. The replacement cost of an asset could be determined to differ from its historical cost on initial recognition, for example, if its capacity exceeds what the entity can expect to use, or if the asset is part of an obsolete plant or could have been acquired or constructed at a more economic cost.

Comparison with Fair Value

329. Under the fair value measurement objective all assets are priced in competitive relationship with one another. Market forces can be expected to drive the fair values of all assets to the same equilibrium expectation of earning the available market rate of return for equivalent risk on the measurement date (see paragraphs 101-108). The result is that, if an asset is perceived by market participants to be a less economic provider of goods and services than some other asset, its price will be discounted in relation to that of the more economic substitute. For example, suppose an entity acquires a computer that is technologically inferior to another model. Market participants can be expected to know this, assuming the information is publicly available. Thus, the fair value of the entity's computer can be expected to be less than that of the superior alternative by the price effect of the technological difference, as determined by the market. Thus, there is no need to search out and evaluate possible more economic substitutes, because the market will already have done this and priced the existing asset accordingly. From the perspective of the marketplace, the replacement cost of an asset is its fair value.

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[111] The Background Information and Basis for Conclusion appendix in FASB, No. 89, *Financial Reporting and Changing Prices,* 1986, contains a brief discussion of these problems. For a more extensive discussion see Ross M. Skinner and J. Alex Milburn, *Accounting Standards in Evolution,* pages 549-558, and references cited therein.

330. In summary, fair value incorporates the essential properties of replacement cost from the market's perspective. The market price of an asset reflects the market's perception of the highest and best use of the asset's productive capacity or service potential. This is the "most economic" price of that capacity or service potential in the marketplace, taking into account publicly available information with respect to possible substitutes for delivering that potential or capacity.

331. It is important to understand the analogous concept to service potential and productive capacity that is the basis of fair value. Fair value embodies a broader concept than has traditionally been presumed in the theory of replacement cost accounting. The service potential or productive capacity of an asset is expanded to comprise the market's expectation of the asset's cash-generating ability in its highest and best use, discounted using the market risk-adjusted rate of return.[112] All assets, contractual and non-contractual, can be conceived in terms of the present value of their expected cash-generating ability.

332. This paper proposes, based on the above analysis, that when the fair value of an asset is reliably measurable, there is no need to go further in attempting to estimate its replacement cost. Some may disagree. They may believe that the replacement cost of an asset determined in accordance with the definition at paragraph 320 could, at least in some situations, result in a more relevant amount than its fair value. In order to assess this possibility, it is necessary to identify and assess the possible sources of differences between replacement cost, as traditionally defined, and fair value.

333. Replacement cost as traditionally defined could be expected to differ from fair value in two fundamental respects:

(a) It may reflect entity-specific expectations as to an asset's service potential or productive capacity and its "most economic" replacement cost that differ from market expectations.

(b) In common with historical cost and reproduction cost, replacement cost is not a measure of value received. Rather, it is only a measure of the amount that would be expended to acquire an asset on the measurement date.

334. *Entity-Specific Considerations*. Replacement cost, as traditionally defined, views an asset's productive capacity or service potential in the context of the owning entity's business circumstances, intentions, and expectations. This requires a search for possible substitutes for the existing asset that could deliver its productive capacity or service potential at a more economic cost to the entity. The assessment of possible substitutes must presumably be made on the basis of entity management's expectations as to the highest and best use to which the entity would put the asset's productive capacity or service potential. Some might challenge this presumption, noting that an estimation of replacement cost could be based on a valuation by an independent professional valuator. The principles and techniques used by professional valuators warrant study, which is beyond the scope of this paper (see paragraphs 269-275). It would seem particularly important to evaluate the source of expectations and assumptions used by professional valuators. Based on the analysis in this paper, it seems likely that a professional valuator's expectations and assumptions could be classified as either market-based or entity-specific. If a valuator's estimation of an asset's replacement cost is founded in market prices or independently substantiated estimates of market expectations, then the result is an estimate of the asset's fair value. Alternatively, if a valuator's estimation of replacement cost

[112] Some recent literature has advocated a broader concept of replacement cost as the cost to replace an asset's capacity to generate cash flows, but generally within a value-to-the-entity context. See, for example, Australian Accounting Research Foundation, Accounting Theory Monograph 10, *Measurement in Financial Accounting*, 1998, paragraph 3.41.

cannot be substantiated to be consistent with market expectations, it must be significantly dependent on the entity's expectations or on the valuator's expectations that are accepted by the entity for financial reporting purposes. In either case, the result is an entity-specific estimate of replacement cost.

335. Again we refer back to the tentative conclusion in chapter 4, that the market (fair) value measurement objective has important qualities that make it of superior relevance to entity-specific measurement objectives, at least on initial recognition. Therefore, the question is whether an entity-specific determination of the replacement cost of an asset on initial recognition that differs from its fair value could have attributes not recognized in the analysis of chapter 4 that would change that tentative conclusion.

336. Certain basic issues relating to entity-specific replacement cost measurements may be illustrated by an example. Suppose that an entity acquires a luxury car solely for the purpose of delivering pizzas. The fair value of the luxury car can be expected to be reliably measurable, assuming there is an active market for such cars. This fair value reflects knowledgeable market participants' expectations of the highest and best use of the asset's service potential. What is the appropriate entity-specific basis for determining the pizza delivery service potential for the purpose of measuring the car's replacement cost? The referents for determining the most economic cost of the same pizza delivery service potential in the particular circumstances must depend on management intentions and expectations. At one extreme, the entity might justify the full market price of the car in the belief that, for the intended clientele, the luxury car adds a vital revenue-enhancing prestige factor. At the other extreme, it might be argued that all that is needed is a moped or a bicycle, in which case the replacement cost of the luxury car's service potential would be that of a moped or bicycle.

337. This example illustrates that an entity-specific determination of the service potential or productive capacity of an asset to be used in a revenue-generating activity may differ from that made by the market, and that possible differences may have significant measurement effects. It also illustrates the potential ambiguity of an entity-specific replacement cost measurement objective when the service potential or productive capacity of an asset in its highest and best use in the marketplace may exceed the needs of an entity. As observed in paragraph 327, some other possible sources of ambiguity in entity-specific determinations of service potential or productive capacity involve situations in which assets' productive capacities are subject to significant obsolescence or to differences in management strategies and expectations under changing business conditions. The concern is that what constitutes the most economic service potentials or productive capacities of such assets may not be sufficiently definable in the context of a particular entity's circumstances to be unambiguously identified and measured in many circumstances. This concern goes beyond reliability in the sense that it relates to the ability to define the replacement cost measurement objective in the context of a particular entity for many assets in common circumstances. The service potential or productive capacity of some assets may be capable of reliable determination for some assets. For example, the productive capacity of plant and equipment that are not susceptible to rapid technological change or obsolescence may be definable in reasonably objective entity-specific terms. Nevertheless, the concerns raised above give cause to doubt the general applicability of an entity-specific replacement cost objective.

338. In addition, some costs may be included in an entity-specific measure of the replacement cost of an asset that are excluded in measuring its fair value. Primary among these are transaction costs (as defined in paragraphs 193-200).

 

339. *Replacement Cost — Not a Measure of Value Received*. As defined at paragraph 320, replacement cost purports only to be a measure of the most economic cost that would be expended to obtain the service potential or productive capacity of an asset; it is not a measure of value received. Thus, as with historical cost and reproduction cost, it cannot stand on its own as a measurement basis, but must be subject to additional conditions relating to asset recognition and recoverability. In sum, replacement cost is missing an important attribute that is represented in fair value.

340. Most accountants seem now to accept that the replacement cost of an asset should be subject to a recoverable amount ceiling. Many current cost advocates believe that the relevance of replacement cost (and reproduction cost) should be evaluated within the context of deprival value, which is analyzed in a subsequent section of this chapter. It should be recognized, however, that a lower of replacement cost and recoverable amount measurement objective has significant consequences for assessments of productive capacity capital maintenance. The recoverable amount of an asset that is lower than its replacement cost cannot serve as a measure that shows whether productive capacity is maintained. It may be reasoned, however, that placing replacement cost within the deprival value framework enables a broader financial operating capability interpretation of capital maintenance (rather than physical productive capacity) that does have relevance.

341. In summary, a measure of the replacement cost of an asset on initial recognition that differs from its fair value is subject to the limitations of entity-specific determinations of the most economic cost of replacing the asset's service potential or productive capacity, and to the fact that replacement cost is not a measure of value received.

342. A common answer to these criticisms of replacement cost as a measurement basis differing from fair value is that the entity-specific concept of replacement cost should be expanded to be based on an expectation of rational management behaviour. The most economic cost to replace an asset's productive capacity would then be determined on the basis of what a rational manager should be expected to decide in the particular circumstances of the entity. A well-defined rational management behavioural framework would, it is argued, eliminate unjustifiable entity-specific expectations. Attention then turns to defining and evaluating what should be considered to constitute rational management behaviour and how it may lead to measurements that differ from fair value. The principal rational management behavioural framework is deprival value, which is examined in a subsequent section of this chapter.

*Liabilities*

343. Paragraph 83 proposes that the current cost equivalent for a liability be defined as the fair value of consideration that the owing entity would have received if the liability had been incurred on the measurement date.

344. This proposed definition does not make any reference to the replacement of productive capacity or service potential, because this would seem to be a property of assets rather than liabilities. The literature on replacement cost measurement that focuses on the objective of productive capacity capital maintenance has largely ignored the valuation of liabilities. Rather, the primary concern with liabilities in this literature has been whether, and if so how, holding gains and losses arising from measuring assets at their replacement cost should be allocated between liabilities and equity. In summary, there would seem to be a lack of literature on replacement cost per se that is helpful in addressing the measurement of liabilities.

345. The definition of the current cost equivalent for a liability proposed above appears to be generally consistent with current cost objectives, with the caveat that it should be interpreted in terms of what could be considered to be rational or "most economic" within the entity's circumstances. This current cost measure of a liability may rarely differ on initial recognition from its measurement on an historical cost basis.

346. Current cost liability measurement suffers from the same limitations as historical cost liability measurement on initial recognition. These measurement bases purport only to measure the fair value of the consideration that was received (historical cost basis) or would be received (current cost basis), which may have no relationship to the probable sacrifice necessary to satisfy the liability. For example, no amount would be provided for a liability that arises as a result of a loss, such as may arise from a lawsuit, and there is likely to be no observable basis for determining the fair value of consideration that would be received for incurring asset retirement or post-employment benefit obligations. Further, a current cost liability provision, such as a provision for warranties or asset retirement obligations, would be based on entity-specific expectations, with consequent possible differences from fair value. For example, an entity could decide to charge less than the market price for a warranty, and therefore receive less consideration, presumably in the belief that it could service the liability at less cost than is implicit in the market price.

347. In summary, the liability equivalent to replacement cost is not well defined in the literature, but can be reasoned to be:

(a) missing the vital dimension of expected future sacrifice value, and

(b) subject to the limitations of an entity-specific measurement basis.

*Summary — Conclusion on Relevance*

348. *This paper proposes, based on the foregoing analysis, that reproduction cost and replacement cost are each subject to significant limitations in what they can purport to measure that render them less relevant measurement bases than fair value on the initial recognition of assets and liabilities.*

349. In summary, it is proposed that the above analysis provides a strong case for concluding that current cost bases (reproduction and replacement cost) are of more limited relevance — that is, they may be expected to have more limited information value and decision usefulness — than fair value for measuring assets and liabilities on initial recognition in all situations when fair value can be reliably estimated. The above analysis is not exhaustive, however, and a more extensive examination of reproduction cost and replacement cost against the criteria set out in paragraphs 28-65 might reveal additional insights.

350. Some propose that an estimate of fair value may be based on replacement cost. This paper proposes, in paragraphs 329-332, that the fair value of an asset embodies the essential properties of replacement cost, but that the reverse is not necessarily the case. Thus, this paper reasons that an asset's replacement cost should not be represented to be its fair value unless the essential conditions of fair value can be demonstrated to be met on the measurement date.

### *Current Cost as a Substitute for Fair Value on Initial Recognition*

*Relevance*

351. It follows from the above conclusion that fair value should be used in preference to reproduction and replacement cost for the measurement of assets and liabilities on initial recognition when fair value can be reliably measured. The question is then whether one or both of the current cost bases could be a more appropriate substitute for fair value than historical cost when fair value is not reliably measurable on initial recognition. The current cost

 

measurement objective may be reasoned to be more relevant than that of historical cost. This is because historical cost purports to measure what was paid for an asset, or received for a liability, while the current cost bases purport to measure the most economic amount that rationally could have been paid or received on initial recognition. Thus, if current cost amounts are reliably measurable and can be expected to be recoverable, they could be expected to have more information value than historical cost on initial recognition.

352. In comparing the two current cost objectives, the replacement cost of an asset purports to represent more than its reproduction cost, and thus is conceptually a more relevant objective. It is important, however, to consider the relationship between replacement cost and reproduction cost. Some have proposed that the current cost of an asset should be defined as the lower of replacement cost and reproduction cost.[113] It seems difficult to conceive of a situation in which the reproduction cost of an asset could be less than its replacement cost. In the event that reproduction cost is lower than the cost of any other replacement possibilities, then it would seem that it must be the asset's replacement cost — that is, that the most economic cost to replace the asset's service potential or productive capacity is the most economic cost to reproduce it on the measurement date.

353. Thus, a relevance hierarchy of cost substitutes for fair value in measuring assets on initial recognition may be set out. First preference is replacement cost, second preference is reproduction cost, and third preference is historical cost. It is stressed that, to qualify as possible substitutes for fair value, these cost measures must be reliably measurable and reasonable conditions relating to recoverability must be met. An analogous relevance hierarchy may be set out for liabilities, except that there is no liability equivalent to the replacement cost of an asset (see paragraphs 343-347). It must also be stressed that, to qualify as a substitute for fair value, a current consideration measure of a liability must be reliably measurable and reasonably reflect the amount owing on the date of initial recognition.

*Reliability Limitations*

354. While the replacement cost objective can be reasoned to be more relevant than reproduction cost or historical cost on initial recognition, there are serious problems with respect to its capability for reliable estimation. As discussed in paragraphs 327, 336 and 337, these problems stem from the replacement cost objective itself, specifically from the lack of objective bases for defining the most economic cost of replacing the service potential or productive capacity of many assets in entity-specific contexts. These problems become acute when the existing service potential or productive capacity of an asset may be most economically achieved by using different assets from those owned by the entity — that is, when an asset's replacement cost differs from its reproduction cost.

355. *This paper proposes, based on the above analysis, that replacement cost determined in an entity-specific context is generally not likely to be capable of sufficiently reliable estimation to be used as a substitute for fair value in measuring many assets on initial recognition.*

356. This proposed conclusion is subject to further study beyond the scope of this paper. In particular, it is recommended that research be undertaken into replacement cost valuation techniques employed by professional valuators to assess under what circumstances reliable market-based and entity-specific estimates of replacement cost of assets on initial recognition may be possible (see paragraph 275).

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[113] See, for example, Australian Accounting Standards Board, *Staff Paper: Fair Value, Deprival Value and Depreciated Replacement Cost,* paragraph 18. This reflects the position taken by the Australian Society of Accountants and the Institute of Chartered Accountants in Australia. See "Current Cost Accounting", in *Guidance Notes on Statement of Accounting Practice SAPs*, as amended in 1978.

357. The reproduction cost of an asset on initial recognition seems likely to be capable of reliable estimation on an entity-specific basis in some situations in which replacement cost will not be reliably measurable. For example, the reproduction cost of some self-constructed assets may be capable of reliable estimation on initial recognition, and may differ from historical cost. It is, however, vulnerable to the same allocation problems as historical cost.

358. It is proposed that current cost be interpreted to be replacement cost when replacement cost is reliably measurable, or failing its reliable measurement, to be reproduction cost when reproduction cost is capable of reliable measurement.

359. *Based on the above analysis, this paper proposes that the current cost of an asset, and the current consideration amount of a liability, be used on initial recognition in preference to historical cost as a substitute for fair value when:*

*(a) it is capable of reliable estimation, and*

*(b) it is reasonable to assume that it is recoverable (if an asset) or reasonably represents the amount owing (if a liability).*

*When the above conditions for the use of current cost, or current consideration amount, are not met, it is proposed that historical cost is an acceptable substitute on initial recognition when it is capable of reliable measurement and it is reasonable to assume that the historical cost amount is recoverable (if an asset) or reasonably represents the amount owing (if a liability).* (See paragraph 316.)

360. Current cost will commonly equal historical cost on initial recognition, but it could differ significantly from historical cost in some situations. Significant differences could arise, for example, when the historical cost of a constructed asset requires the allocation of costs incurred in past periods (see paragraph 310), and in respect of assets for which there are significant pre-recognition costs that are not recognized on the historical cost basis (see paragraph 311). For practical purposes, historical cost might be accepted in lieu of current cost as a substitute for fair value on the initial recognition of assets and liabilities absent persuasive evidence that a reliable measurement of current cost would differ significantly from historical cost.

361. Parallel to the proposal in paragraph 318 with respect to historical cost, it is proposed that the current cost of an asset, and the current consideration amount of a liability, should be determined on a basis that is as consistent as possible with the fair value measurement objective. This would mean, for example, excluding transaction costs (as defined in paragraphs 193-200).

## Net Realizable Value

### *Relevance*

*Assets*

362. The working definition of net realizable value (see paragraph 84) is:

> The estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

363. In contrast with cost-based measurement bases (historical cost and current cost), net realizable value is a measure of the benefit value of an asset. The question is whether it is the most relevant measure of the benefit value of an asset on initial recognition.

 

364. Current realizable value models have been strongly advocated over historical cost and current cost models by a few prominent academics.[114] They disagreed among themselves on some fundamental issues, however, including what should be the unit of account (that is, what should be the level of aggregation of assets) and whether the objective should be to assume sales in the ordinary course of business or on the basis of liquidation prices. Net realizable value, as defined above, has generally been used in financial accounting in a rather limited role, being largely restricted to lower of cost and recoverable value determinations.

365. One major reason why realizable value has been rejected as a general measurement basis is that it results in seemingly unrealistically low values for most productive assets such as plant and equipment, and would often require large write-offs on the acquisition of such assets.

### Comparison with Fair Value

366. There appear to be two possible areas of difference between net realizable value and fair value:

(a) Focus of net realizable value on realization through sale.

(b) The dependency of net realizable value on entity-specific expectations.

#### Focus on Sale

367. Net realizable value is generally interpreted to presume realization through sale, rather than through holding or using an asset. While the phrase in the definition "selling price in the ordinary course of business" is presumably intended to avoid a forced or liquidation sales price, the term "net realizable value" is generally interpreted to preclude a value in use connotation. In contrast, fair value reflects the price of an asset in what the market perceives to be its highest and best use. The fair value of an asset is not its net selling price on a measurement date, if this is not its highest and best use in the marketplace. For example, there may be no market (as defined at paragraph 107) for a particular specialized non-contractual asset. This asset might be saleable only as a non-specialized asset (with adjustment for the costs to remove its specialization features) or for the scrap value of its components. Such determinations are not relevant measures of this asset's fair value when its highest and best use in the marketplace can be reasoned to lie in its use as a specialized asset in a revenue-generating process. See discussion of this situation and related issues at paragraphs 260-262 and 269-275.

368. Net realizable value is reduced by costs that are estimated to be necessary if the asset is sold, but that would not otherwise be incurred. It has been explained (see paragraph 199) that fair value excludes transaction costs or penalties that would be incurred to sell an asset. If such costs are avoidable, that is, they would not be incurred in the highest and best use of an asset in the marketplace, then they would be recognized only if the asset is sold and thus would be an expense of the sales transaction. On the other hand, if certain exit costs are unavoidable, that is, the entity is obligated to incur them to realize the fair value of an asset, then such costs may qualify as liabilities and, if so, should be separately recognized as such. Netting such liabilities against the fair value of the asset would contravene the conceptual distinction between assets and liabilities.

#### Entity-Specific Expectations

369. The net realizable value of an asset may generally be expected to differ from fair value by the amount of transaction costs deducted in determining net realizable value, and by the extent to which estimates of the costs of completion (if any) differ from the adjustment that the market could be expected to make. In addition, the phrase "the estimated selling price in the ordinary

[114] See, for example, R. J. Chambers, *Accounting, Evaluation and Economic Behaviour,* and *Accounting for Inflation: Methods and Problems,* and R. R. Sterling, *Theory of the Measurement of Enterprise Income.*

course of business" could be interpreted in an entity-specific context that is not consistent with the fair value measurement objective. These possible differences reflect the effects of differences between entity-specific and market expectations.

370. The basic question thus again arises as to the comparative relevance of entity-specific and market value measurement objectives. In this case, could entity-specific adjustments entering into the determination of net realizable value be reasoned to have relevance not considered in arriving at the tentative conclusion in chapter 4 (that the market (fair) value measurement objective is more relevant than entity-specific objectives on the initial recognition of an asset)? The above analysis and review of accounting standards and supporting literature on net realizable value did not reveal any evidence or arguments that would give cause to change this conclusion. This paper therefore proposes that fair value is more relevant than net realizable value for measuring assets on initial recognition.

*Liabilities*

371. As noted in paragraph 85, the liability equivalent of net realizable value seems not to have been defined and analyzed in accounting literature. However, it is proposed that it be described as the release amount and defined as follows:

> The estimated amount that would be incurred in the ordinary course of business to be released from a liability on the measurement date plus the estimated costs necessary to secure that release.[115]

372. The focus on current release, and the inclusion of entity-specific transaction costs, mirrors the two areas of difference between net realizable value and fair value of assets addressed above. Thus, the liability equivalent to net realizable value is subject to the same types of differences and relevance limitations as is the net realizable value of assets.

*Summary — Conclusion on Relevance*

373. *This paper proposes, based on the above analysis, that net realizable value, and its liability equivalent, is a less relevant measurement basis than fair value on the initial recognition of assets and liabilities.*

### *Net Realizable Value as a Substitute for Fair Value on Initial Recognition*

374. The question then is whether net realizable value could be an appropriate substitute for fair value on the initial recognition of assets and liabilities when fair value is not capable of reliable estimation. This paper proposes that, as a substitute for fair value, net realizable value should be applied on a basis that it as consistent as possible with the fair value measurement objective. This would mean:

(a) interpreting "the estimated selling price in the ordinary course of business" as a market value measurement objective,

(b) excluding transaction costs (that is, adding them back to net realizable value), and

(c) interpreting "costs of completion" within a fair value context.

The result would no longer be net realizable value. It would be an estimate of fair value, if it is substantially based on information that is consistent with market expectations. Alternatively, an estimate of realizable value that is significantly dependent on entity-specific inputs could be considered to be the best substitute for fair value in some situations. For example, it might be determined that the closest substitute for the fair value of a work-in-process inventory

[115] The term "release" is considered to include direct settlement with the creditor, effective settlement resulting from an entity acquiring its traded debt instruments in the marketplace, and an arrangement under which a third party assumes an entity's obligation.

 

acquired as part of a business acquisition is to adjust the observable market price of the finished good by an entity-specific estimate of the costs of completion.[116] The question would then be whether this measurement could be accepted to be a reliable estimate of the fair value of the work in process, or whether its dependency on entity-specific expectations is so significant that it should be treated and described as a hybrid measurement basis substitute for fair value.

375. Thus, following from the above analysis, there is no role for net realizable value, as traditionally defined, in the measurement of assets and liabilities on initial recognition. In other words, the concept requires substantial reinterpretation as a possible estimate of, or substitute for, fair value on initial recognition.

## Value in Use

### *Relevance*

#### *Assets*

376. The working definition of value in use (see paragraphs 86-87) is:

> The present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life.

#### Comparison with Fair Value

377. The above definition simply expresses the present value concept of an asset within the context of a non-contractual asset that is used in a cash-generating process. The value in use measurement objective is not clear from this definition because present value is a technique that can be applied to estimate amounts under several different measurement objectives. The essential question is: whose expectations should be the basis of value in use measurements?

##### Market Expectations

378. If the objective is to apply the present value methodology to estimate the fair value of an asset (that is, to reflect market expectations), then value in use is indistinguishable from the fair value measurement objective. Present value-based models for estimating fair value are at Level 3 of the fair value measurement hierarchy of the IASB and FASB examined at paragraphs 257-275. The term "value in use" has not generally been used to describe present value-based estimates of fair value.

##### Entity-Specific Expectations

379. The term "value in use" has generally been considered to be an entity-specific measurement objective. From this perspective, the value in use objective is to measure the present value of the estimated net cash inflows that the entity expects an asset to generate. This measure could differ significantly from the asset's fair value on initial recognition. In this context, value in use is a separate measurement basis distinct from fair value and the other identified measurement bases.

380. Value in use is essentially a forecast that reflects management's expectations. Thus, if the value in use measurement basis were to be adopted, assets would be restated on initial recognition from their transaction amounts to management's expectations of the present values of their future net cash inflows. This present value of an asset would presumably generally reflect the highest price that the entity would be prepared to bid for the asset in the marketplace on its

[116] These adjustments would presumably include, if material, an estimate of the effects of the time value of money and a profit margin, each determined on a basis as consistent as possible with the fair value measurement objective.

acquisition date. Accordingly, the fair value of this asset, and the amount the entity actually paid for it, could both be much lower than management's estimation of its value in use on that date. There would seem to be no external referents for value in use measurements, although current accounting standards for value in use measurements (which have been restricted to impaired assets) have attempted to place some boundaries on what it may be reasonable for an entity to expect.[117]

381. In summary, the primary difference between the value in use and fair value measurement objectives is that value in use has an entity-specific measurement objective, which amounts to a forecast by entity management. Based on the above analysis, there would seem to be nothing in the concept of value in use that would give cause to overturn the general conceptual conclusion, developed in chapter 4, that the market value measurement objective is of greater relevance than an entity-specific objective on initial recognition of assets and liabilities. In particular, a major concern with value in use is that it would result in capitalizing management expectations on initial recognition, with the likely consequence of reported gains for many assets. Such measurements would seem to have no clear external referents without the discipline of prices determined by market forces.

382. The relevance of value in use may be considered to be further limited because it gives consideration only to an asset's in-use value, and thus gives no consideration to its value if sold, other than at the end of its useful life. In addition, the definition of value in use identifies only non-contractual assets that are for use in a business. However, the concept could be extended to contractual and other non-contractual assets. For example, a loan could be valued on the basis of entity-specific estimates of the present value of the future cash flows the entity expects to collect.

383. Value in use does not have support in accounting standards, or in authoritative literature or practice, as a general measurement basis for assets on initial recognition. Its use has been limited to a measure of the recoverable value of impaired assets, and it has been advocated as a measure of recoverable value within the deprival value framework. Its role within that framework is examined in the following section.

*Liabilities*

384. Value in use, as traditionally defined, has application only to assets. However, its liability equivalent may be conceived as an entity-specific estimate of the present value of cash outflows expected to be incurred in satisfying an obligation. This has been described as the "cost of performance" basis.[118] Certain liabilities, such as warranty obligations, could be measured on this basis. As with an asset, the present value measurement of a liability will differ from fair value to the extent that it reflects entity-specific expectations with respect to future cash flows or the discount rate that differ from market expectations. Such entity-specific expectations can be expected to be subject to the same relevance limitations in relation to market expectations discussed in respect of assets.

*Summary — Conclusion on Relevance*

385. *This paper proposes, based on the above analysis, that value in use, and its liability equivalent, is a less relevant measurement basis than fair value on the initial recognition of assets and liabilities.*

[117] See for example, IAS 36, paragraphs 30-57.

[118] See Andrew Lennard, *Liabilities and how to account for them: an exploratory essay*, paragraphs 27 and 32.

 

### *Value in Use as a Substitute for Fair Value on Initial Recognition*

386. This paper proposes that the value in use measurement basis may be adapted to be an estimate of fair value, or to be an acceptable substitute for fair value for some assets and liabilities on initial recognition when fair value is not capable of reliable estimation. Such adaptation involves applying the present value technique on a basis that is as consistent as possible with the fair value measurement objective. This would require using market data and assumptions that are consistent with market expectations when such data and assumptions are available. Certain presumptions may be made as to what should be considered to constitute rational market expectations in applying the present value methodology. For example:

(a) the discount rate should be consistent with the market rate of return for equivalent risk on the measurement date, except that the discount rate should not reflect risks for which future cash flows have been adjusted;

(b) estimates of expected future cash flows should reflect expected future levels of inflation or deflation that are consistent with those implicit in the discount rate;

(c) estimates of uncertain cash flows should reflect probability-weighted expected values to the extent practicable; and

(d) estimates of expected future cash flows may be expected to be consistent with reasonable extrapolations of past general economic and relevant industry experience in the geographic areas in which the assets or liabilities are located, unless there is convincing external evidence to support different expectations.[119]

387. These presumptions are generally consistent with the guidance provided in CON 7. The FASB Exposure Draft, *Fair Value Measurements*, summarizes the following possible sources of market inputs:

> "Market inputs shall be determined based on information that is timely, originated from sources independent of the entity, and used by marketplace participants in making pricing decisions. Examples of market inputs that may be used, directly or indirectly as a basis for deriving other relevant inputs, include the following:
>
> (a) Quoted prices (whether quoted in terms of completed transaction prices, bid and asked prices, or rates), adjusted as appropriate ....
>
> (b) Information about interest rates, yield curve, volatility, prepayment speeds, default rates, loss severity, credit risk, liquidity, and foreign exchange rates.
>
> (c) Specific and broad credit data and other relevant statistics (industry and other), including a current published index." (paragraph 12)

388. The adaptation of value in use to be as consistent as possible with the fair value measurement objective means that it is no longer consistent with the traditional interpretation of value in use. As a consequence, this paper proposes that the term "value in use" should not be used to describe present value estimates that are estimates of, or substitutes for, fair value — in order to avoid confusion with the traditional entity-specific understanding of the term.

389. At the same time, these present value estimates will not meet the conditions for faithfully representing the fair value measurement objective when significant market inputs are not available so that estimates are significantly dependent on entity-specific data and expectations that cannot be justified to be the same as market expectations.[120]

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[119] IAS 36 *Impairment of Assets* requires that "value in use" cash flow estimates be based on external evidence when available, sets out certain rebuttable presumptions with respect to long-term projections, and requires the use of market rates of interest to discount future cash flows. See IAS 36, paragraphs 30-57.

[120] See paragraphs 266-267 for discussion of the basis for this conclusion.

390. Such present value estimates may, however, be the best possible substitute for fair value for certain assets and liabilities for which neither reliable fair value nor reliable cost-based measures are available. Examples include obligations in respect of defined benefit pension plans and asset retirements, where there are typically no comparable market prices and no observable transactions. These present value estimates may commonly be subject to significant measurement uncertainty, but may be considered to be of acceptable reliability, if supported by appropriate disclosures.[121] The challenge for standard setters is to develop specific standards for present value estimates for these types of assets and liabilities that are as consistent as possible with the fair value measurement objective, and meet reasonable conditions for internal consistency, neutrality, and verifiability.

391. In addition to estimation uncertainty, present value estimation bases are subject to serious indeterminacies in certain common situations. In particular, many non-contractual assets do not generate cash flows in and of themselves. Rather, they contribute along with other inputs to cash-generating processes. Any attribution of the cash flows of a cash-generating process to individual inputs must be based on arbitrary one-to-many allocations. Therefore, if the appropriate unit of account on initial recognition is considered to be the lowest level of aggregation at which an identifiable asset is ready to contribute to the generation of future cash flows (see paragraph 161), then it may be concluded that the present value of the cash flows to be generated by an asset that is used with other assets in a cash-generating process is not reliably measurable.

392. *In summary, this paper proposes that:*

*(a) Value in use, defined as an entity-specific objective, is not an appropriate substitute for fair value on initial recognition.*

*(b) However, a present value-based estimate of future net cash flows to be received or paid in respect of an asset or liability may be an acceptable estimate of, or substitute for, fair value on initial recognition, if the future cash flows and discount rate(s) can be reliably estimated and the estimate is determined on a basis as consistent as possible with the fair value measurement objective. When such an estimate is significantly dependent on entity-specific expectations that cannot be justified to be the same as market expectations, it should be considered to be a hybrid measurement basis substitute for fair value.*

*(c) The present value of future cash flows cannot be independently estimated, and therefore cannot be reliably determined, for individual non-contractual assets that are used together with other inputs in a cash-generating process.*

## Deprival Value

### *Relevance*

#### *Assets*

393. Some believe that it is not sufficient to evaluate each of the identified measurement alternatives as separate and independent bases. They argue that these bases should be considered in the context of an overarching theory of the value of an asset to a business within a rational management decision framework. The value of an asset to an entity is reasoned to depend on the opportunities that are available to that entity for the use or sale of that asset. The appropriate

[121] The only alternative may be non-recognition of the asset or liability, and it may be concluded that even an estimate subject to significant estimation uncertainty is superior to non-recognition (which results in a zero value) if appropriate supporting disclosures can be provided. See discussion of this issue at paragraphs 217-222, and in respect of disclosures, at paragraph 268.

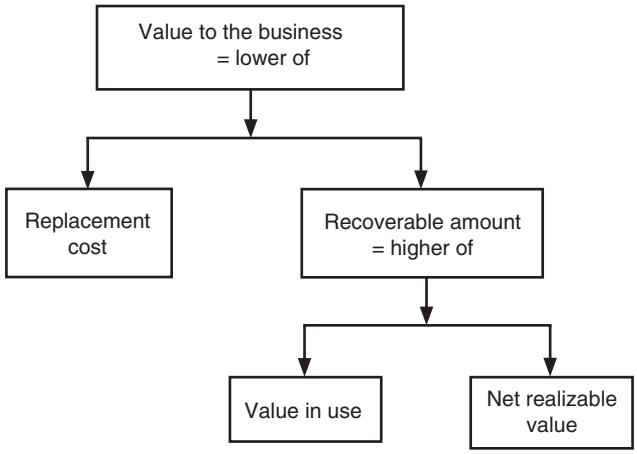
 

measurement for an asset is then determined by the opportunity that a rational manager should be expected to pursue in the entity's circumstances. Measurement bases that assume opportunities unavailable to the entity or that do not make economic sense in the circumstances are considered to be irrelevant. The rational management measurement framework that is commonly advocated is "deprival value", also known as "value to the business".

394. The working definition of deprival value (see paragraphs 94-95) is:

> The loss that an entity would suffer if it were deprived of an asset. It is the lower of replacement cost and recoverable amount on the measurement date, with recoverable amount being the higher of value in use and net realizable value.

395. The deprival value framework holds that the value of an asset to a business entity is the economic loss that the entity would suffer if deprived of the asset. It is reasoned that the loss to the entity could not exceed the most economic current cost to replace the productive capacity or service potential of an asset. The upper boundary of an asset's deprival value is its replacement cost because, when (as will usually be the case) an entity expects a return from the asset in excess of its replacement cost, the entity will not lose that return since it can replace the asset for a lower amount.[122] It is further reasoned that a rational entity will not replace an asset when its recoverable amount is less than its replacement cost, because it does not make economic sense to replace an asset that cannot be expected to recover its replacement cost. In this case, if deprived of the existing asset, the entity stands to lose its recoverable amount. Recoverable amount reflects two possibilities (opportunities) — the entity could sell the asset for its net realizable value, or it could use the asset and achieve its value in use. A rational entity can be expected to choose the alternative that yields the higher recoverable amount. Thus, the recoverable amount to an entity is considered to be the higher of its net realizable value and value in use. This chain of logic leads to the decision rule set out in the definition and illustrated in the following diagram.




[122] Some believe that there is an anomaly in the deprival value rationale if the replacement cost of an asset is determined to be less than its net realizable value. They argue that the deprival value of an asset in this case should be its net realizable value, so as to include the value of the "redevelopment option". They reason that rational management would sell the asset to realize its net realizable value and then replace it at its lower replacement cost. See Geoffrey Whittington, "Deprival Value and Fair Value: An Amendment and a Reconciliation", Unpublished Draft Paper, February 2003. Some others see this as a problem in defining an asset's replacement cost, arguing that the replacement cost of an asset could never be rationally determined to be less than its net realizable value. See, for example, Australian Accounting Research Foundation, Accounting Theory Monograph 10, *Measurement in Financial Accounting*, paragraph 21. This issue demonstrates an ambiguity in the entity-specific concept of replacement cost that is illustrated in part by the pizza delivery vehicle example in paragraph 336.

396. The deprival value decision framework is not intended to mean that particular entities will necessarily make rational decisions in accordance with it. Rather, it holds that entities should be accountable for measuring assets on the basis of this rational decision framework.

COMPARISON WITH FAIR VALUE

397. It is instructive to compare deprival value with fair value, so as to understand when and why deprival value can differ from fair value on the initial recognition of an asset. The relationship between deprival value and fair value may be illustrated by an example. Suppose that:

(a) the fair value of an asset on initial recognition is reliably measurable, and is 100;

(b) transaction costs to acquire the asset are 5, in which case replacement cost may be reasoned to be 100 plus 5 (i.e., 105); and

(c) transaction costs to sell the asset are 3, in which case net realizable value may be reasoned to be fair value of 100 less 3 (i.e., 97).

From the market perspective, value in use is the present value of expected future cash flows reflecting market expectations, which is 100. The deprival value of an asset whose fair value is reliably measurable may then be determined to be the lower of its replacement cost (in this case 105) and recoverable amount (in this case 100, being the higher of net realizable value of 97 and the market equivalent of value in use of 100). Transaction costs to acquire the asset do not enter into this measurement of deprival value because they are not recoverable. Transaction costs to sell the asset are not deducted because they will not be incurred under the highest and best use of the asset.

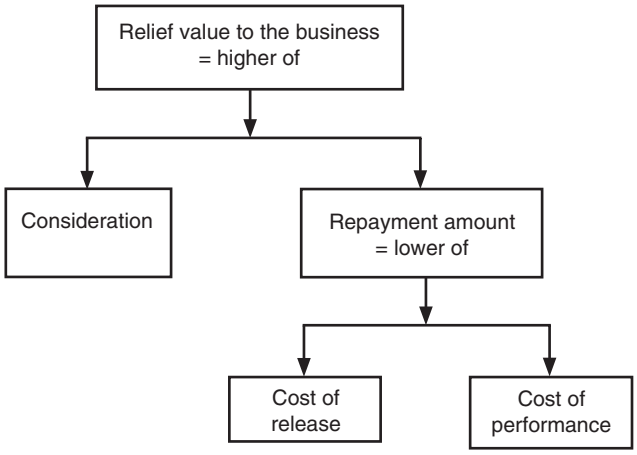
398. Thus, an asset's deprival value is its fair value, if deprival value is measured on the basis of market expectations. In other words, measured on the basis of market expectations, the economic loss that an entity would suffer if deprived of an asset is its fair value. It may be concluded then that deprival value could differ from fair value only when an entity's management has different expectations from those that are implicit in the market price. In the example above, if the entity's management believes that the value in use of the asset is more than 100, say 150, then its deprival value will be equal to its replacement cost of 105 (because its replacement cost will then be less than its recoverable amount). In this case, a replacement cost that exceeds the fair value of the asset is justified under deprival value on the basis of management's expectation that the asset's value in use is greater than its fair value.

399. The basic question arises again — whether entity-specific measurements, in this case made in the context of the deprival value framework, can be considered to be more relevant than fair value for an asset on initial recognition. Deprival value is subject to the entity-specific limitations of each of its three measurement components (replacement cost, net realizable value, and value in use) that have been demonstrated in preceding sections. There would seem to be nothing in the theory of deprival value that mitigates these limitations.

*Liabilities*

400. The liability equivalent of deprival value has been referred to as "relief value".[123] It has been proposed in paragraph 96 that the relief value of a liability is the higher of the consideration amount (that is, the fair value of the consideration that would be received if the liability were incurred on the measurement date) and repayment amount, with repayment amount being defined as the lower of the current cost of performance and the current cost of release from the liability (see the diagram below).




401. The relief value of a liability may be compared with its fair value with parallel results to the comparison of the deprival value and fair value of an asset. It is, therefore, reasoned that relief value is subject to the same limitations in relevance in comparison with fair value as has been demonstrated for deprival value.

*Summary — Conclusion on Relevance*

402. *This paper proposes, based on the foregoing analysis, that deprival value (relief value) reflecting entity-specific assumptions and expectations is a less relevant measurement basis than fair value on the initial recognition of assets (liabilities).*

403. The above analysis and proposed conclusion are not intended to suggest that the deprival value (relief value) of an asset (liability) does not have relevance if it differs from fair value on initial recognition. Rather, it is proposed that its relevance lies in its use for internal management purposes, and possibly as the basis for supplementary information about management's expectations. Deprival value projects entity management's expectations beyond the existing value of an asset in the marketplace. It provides a rational decision framework for management's evaluation of the value of an asset to the entity, based on its expectations as to the future outcomes of opportunities that are open to it. Management's evaluation of the value of an asset is based on comparing management's forecast of the present value of the future cash flows to be achieved through the asset's use, management's expectations of the most economic cost to replace the asset's service potential, and the net proceeds that management would expect to realize if the asset were sold. Such estimations may require "what if" projections, and different estimates of deprival value might well be made on the basis of different possible scenarios. Such estimates may be invaluable to management in evaluating buy, replace, sell,

[123] See, for example, ASB, *Statement of Principles for Financial Reporting,* paragraph 6.9.

hold and use opportunities; for example, in assessing the maximum amount that it should be prepared to pay for an asset. Certainly, entity-specific valuations are essential to an efficient market process, since market prices reflect the competitive interaction of the diverse expectations of buyer and seller interests.

404. External financial reporting purposes are fundamentally different from the above internal management purposes. This paper proposes that the agreed purposes of financial reporting (set out and analyzed at paragraphs 28-65) are best accomplished (for the reasons developed in the general conceptual analysis in chapter 4) when assets and liabilities are measured on initial recognition at their value in the marketplace, rather than on the basis of the expectations of the entity's management. The value of assets and liabilities to an entity will ultimately be determined by the outcome of market forces, so it is proposed that the most relevant measure of an asset or liability on initial recognition is its value in the marketplace at that time.

405. In summary, it has been demonstrated that deprival value (relief value) is a measurement framework that yields measurements that differ from fair value only when it is based on entity-specific expectations that differ from market expectations. It is concluded, for the reasons referred to above, that deprival value (relief value) is less relevant for external financial reporting purposes than fair value in measuring assets and liabilities on initial recognition.

### *Deprival Value as a Substitute for Fair Value on Initial Recognition*

406. When fair value is not reliably measurable on initial recognition, deprival value may be argued to have merit as a rational decision framework for selecting between replacement cost (or its possible reproduction cost and historical cost substitutes), net realizable value, and value in use, for the following reasons:

(a) The rational management behavioural implications of deprival value overcome a basic limitation of replacement cost standing on its own. Since the deprival value of an asset is its recoverable amount when replacement cost exceeds recoverable amount, deprival value can purport to be a measure of the asset's value as a source of future inflows of economic benefits.

(b) Further, a fundamental problem with net realizable value as a stand alone measurement of an asset's value as a source of future inflows of economic benefits — that is, its focus only on realization through sale — is also resolved within the deprival value framework. This is because, within deprival value, net realizable value is considered to be a rational measure of recoverable amount only when it exceeds value in use, that is, when it is rational to sell the asset.

(c) Similarly, value in use is considered to be the relevant measure of an asset's recoverable amount only when it is rational to continue to use the asset.

Thus, deprival value can be reasoned to be of greater relevance than any of the three component measurement bases taken by themselves.

407. The application of the deprival value decision rule as a substitute for fair value, presumes that estimates of each of the three component measurement bases are based significantly on entity-specific expectations, that is, that none of them can be considered to be a reliable estimate of fair value. The traditional concept of deprival value requires some reinterpretation in this light, and in light of the preceding analysis of the three component measurement bases. In summary, the following restatements of each of the three bases are proposed:

(a) *Replacement cost - current cost.* It is proposed that the term "current cost" be used in place of "replacement cost", because it has been reasoned that replacement cost cannot be expected to be capable of reliable entity-specific measurement for many assets. Current

cost would be interpreted to mean replacement cost when it can be reliably measured, but otherwise to mean reproduction cost when reproduction cost can be reliably estimated. When current cost cannot be reliably measured, the fallback would be historical cost, if it can be reliably measured. It has been further suggested that, for practical purposes, historical cost might be accepted in lieu of current cost on initial recognition of an asset, absent persuasive evidence that a reliable measure of current cost would differ significantly from historical cost. The paper further proposes that these cost bases be applied as consistently as possible with the fair value measurement objective. Such application would result in excluding transaction costs (as defined), and could result in other adjustments.

(b) *Net realizable value — realizable value*. This paper proposes that applying net realizable value on a basis that is as consistent as possible with the fair value measurement objective would result in removing transaction and other exit costs that would not be included in fair value, and could result in some other adjustments. The adjusted amount will no longer be *net* realizable value. Rather, it will be either an estimate of fair value or, when significant entity-specific inputs are required, it will be a hybrid measure of an asset's sales price.

(c) *Value in use — present value*. This paper proposes that applying value in use on a basis that is as consistent as possible with the fair value measurement objective will result in a present value estimate that is no longer appropriately described as "value in use". Rather, it will be a hybrid present value substitute for fair value when it is significantly dependent on entity-specific expectations that cannot be justified to be the same as market expectations. Further, the present value of future cash flows cannot be reliably determined for individual non-contractual assets that are used together with other inputs in a cash-generating process. As a result, deprival value is subject to the unit of account limitations of present value measurements. In other words, for current cost, realizable value, and present value bases to be comparable for the same asset, the unit of account must be at the lowest level of aggregation at which the present value of future cash flows can be estimated, which is the smallest group of assets that generates cash flows that are largely independent of cash flows generated by other assets. This will commonly be a significantly larger unit of account than has generally been considered appropriate for the measurement of assets on initial recognition.

A parallel analysis could be made of the relief value liability equivalent of deprival value.

*Summary Proposal*

408. *Based on the above analysis, this paper proposes that, when the fair value of an asset cannot be reliably estimated on initial recognition, the "deprival value" decision rule would, assuming each of the three measurement basis components is capable of reliable determination, be restated to be:*

> *the lower of current cost and recoverable amount, with recoverable amount being the higher of realizable value and the present value of the future net cash inflows to be generated by the asset.*

*Current cost would be replacement cost, or failing its reliable measurement, reproduction cost. If current cost is not capable of reliable measurement, historical cost would be considered an appropriate substitute on initial recognition if it is capable of reliable measurement. Each of these measurement bases would be applied as consistently as possible with the fair value measurement objective.*

409. A parallel restated "relief value" decision rule could be set out for liabilities on initial recognition.

## Measurement Date on Initial Recognition — Additional Considerations

410. It is emphasized that the terms of reference for this paper are that it not examine recognition or re-measurement issues. Its scope is limited to measurement of assets and liabilities when standards require their initial recognition (see paragraph 13). However, it has been observed that there are significant interdependencies between recognition and measurement that cannot be ignored (see paragraphs 14, 15 and 21).

411. A particular issue that has significant implications for evaluating measurement bases on initial recognition relates to the selection of the measurement date on the initial recognition of assets (liabilities) that are acquired (incurred) on the basis of earlier fixed-price contracts. This issue was noted at paragraph 67 where it was stated that the analyses would be based on the presumption that such assets and liabilities are measured as of the date of their initial recognition, rather than as of the earlier contract date. Consideration of the basis for this presumption and its implications has been deferred until after the basic measurement concepts and alternative measurement bases have been addressed. The issue will now be considered. The issue may be best understood by reference to an example:

> Suppose that an entity enters into a contract on January 1 to purchase a truck for 1000 (which is its fair value at that date), which contract specifies that delivery is to be made on March 1 on full payment of 1000 in cash. Suppose that the fair value of the truck increases to 1100 on March 1.

412. This transaction has two components — the contract to purchase the truck entered into on January 1, and the acquisition of the truck on March 1. The contract has a fair value of zero on January 1, because the fair value of the truck equals the fair value of the consideration to be given in exchange for it.[124] This paper does not address whether the contract should be recognized, but if it is recognized, it would be measured on its initial recognition at its fair value of zero. The truck would presumably be initially recognized on its acquisition on March 1, when the entity obtains control of it. The paper would measure the truck at its fair value on March 1, which is 1100. This would result in a gain of 100. If the contract had been recognized at January 1, and initially measured and continually re-measured at its fair value, the gain would be attributed to the contract and reflected in the period from January 1 to March 1. If the contract is not recognized, the gain would arise on the acquisition of the truck on March 1.

413. Some argue that, if the truck is not to be continually re-measured at fair value, it should be measured on its initial recognition (March 1) at its fair value on the date the price was contracted (January 1), that is, at 1000. What is the relevance, they ask, of recognizing the effects of price changes occurring during the contract period if they are not to be recognized during the period in which the truck is carried as an asset?

414. On the other hand, it may be argued that it is more relevant for the truck to be measured at its fair value on its acquisition date, because it does not become an asset of the entity that can be used in its cash-generating activities until that date. The gain then represents the consequences of contracting at a fixed price prior to obtaining the asset, and the entity has chosen to accept the risks of fixing the price at the contract date. The entity may have negotiated different terms, and it may be argued that reflecting a gain or loss on the contract provides useful information about the results of the entity's contracting decisions, regardless of how the truck is accounted for subsequent to its initial recognition.

[124] Any implications of the time value of money and related risks are ignored for the purposes of this discussion.

415. In summary, this paper presumes that assets and liabilities should be measured as of the date they are initially recognized, and it is important to appreciate the implications of that presumption. Certain of the arguments noted are interrelated with issues of recognition and re-measurement which are beyond the scope of this paper. As a result, it may be contended that the paper's presumption of measurement as of the time an asset or liability is initially recognized should be re-evaluated in future studies of recognition and re-measurement.

# Chapter 8 — A Synthesis and Some Consequential Recommendations

416. The fundamental conclusion emerging from the preceding analyses is that assets and liabilities should be measured at their fair value on initial recognition when fair value can be estimated with an acceptable level of reliability. This conclusion does not resolve the matter, however, because fair value often cannot be estimated with acceptable reliability. Accordingly, it is necessary to be able to determine:

(a) when fair value can and cannot be estimated with an acceptable level of reliability; and

(b) when it cannot, what other measurement bases are of sufficient relevance and reliability to serve instead.

417. This paper proposes that, in selecting a substitute measurement basis for fair value on the initial recognition of an asset or liability, one should select the reliable basis that is most consistent with the fair value measurement objective, and apply it as consistently as possible with this objective. If no appropriate measurement basis is sufficiently relevant and reliable, then a basic condition for the recognition of an asset or liability (that "the item has a cost or value that can be measured with reliability")[125] is not met.

## Judging Reliability — Some General Considerations

418. This paper proposes that the reliability of a measurement be judged in terms of whether it faithfully represents what it purports to represent. The reliability of a fair value estimate would be judged, in accordance with the proposals of this paper, in terms of whether it faithfully represents the essential properties of market value on the measurement date. If a substitute for fair value is used, because fair value cannot be reliably measured, the reliability of the substitute would be judged in terms of whether it faithfully represents what the substitute basis purports to represent (which would be something less than what fair value purports to represent).

419. There cannot be a fully objective basis for determining whether a measurement basis is, or is not, capable of reliable estimation. Rather, the determination is, necessarily, a judgment to be made in the context of the circumstances of a particular asset or liability on a measurement date. Nevertheless, the following general considerations seem to be of importance in assessing the reliability of estimates of fair value and possible substitutes for fair value on initial recognition.

### *Disclosure of Measurement Uncertainty*

420. This paper proposes that a measurement may be considered reliable, even when it is subject to a wide range of measurement uncertainty, if the nature and extent of the uncertainty and the basis for selecting a single point measurement are capable of relevant and reliable disclosure.

### *Procedures and Controls*

421. An entity can enhance the reliability of uncertain measurements by putting in place, and documenting, a rigorous system of measurement policies, procedures, and controls. An appropriate system can improve representational faithfulness of uncertain measurements by helping to ensure that all relevant factors are addressed and included, and can enhance the

[125] IASB *Framework*, paragraph 83(b).

internal consistency of such measurements. It is proposed that measurement reliability should be assessed on the assumption that entities develop and document appropriate measurement policies, procedures, and controls.

## A Proposed Measurement Hierarchy on Initial Recognition

422. The following discussion presumes that the asset or liability to be measured on initial recognition has been fully defined, including its unit of account and other value-affecting properties (see paragraphs 139-161).

### *Estimates of Fair Value — Levels 1 and 2*

423. *This paper proposes that the fair value of an asset or liability can be estimated with an acceptable level of reliability on initial recognition when either of the following conditions is met:*

*(a) Level 1 — There is an observable market price for assets or liabilities that are identical or similar to the asset or liability to be measured on or near the time of initial recognition, and reliable adjustment consistent with market expectations can be made for (i) any differences between the market-traded assets or liabilities and the asset or liability being measured and (ii) any time difference.*

*(b) Level 2 — Failing an observable market price meeting the conditions of Level 1, there is an accepted model or technique for estimating the market price of the asset or liability to be measured on initial recognition, and all significant inputs reflect observable market prices or reliably measurable phenomena that can be expected to be the basis of market participants' determinations within the model or technique.*

424. For there to be an observable market price for an asset or liability, there must be a market. Thus, it is necessary to define what constitutes a "market", and when a market price for an asset or liability can be presumed to exist. This paper has described the key attributes of a market price (see paragraphs 99-110). These attributes provide the basis for the superior relevance of fair value for accounting measurement purposes. At the root of these attributes is this accepted premise: Competitive forces in a market will drive the market price of an asset to the price that brings the diverse expectations of knowledgeable and willing arm's length participants into equilibrium. This equilibrium price reflects the market's expectation of earning the currently-available market rate of return for equivalent risk.[126] In a market, when the price of an asset is not in equilibrium with current market expectations (that is, when there is a market expectation that this price will yield an abnormal return), competitive market forces will result in arbitrage transactions that will quickly bring the price into equilibrium.

425. Accounting literature has not defined "market" for the purposes of implementing the fair value measurement objective. The following definition is proposed:

> *For the purposes of applying Levels 1 and 2, a "market" is a body of knowledgeable, willing, arm's length parties carrying out sufficiently extensive exchange transactions in an asset or liability to achieve its equilibrium price reflecting the market expectations of earning or paying the market rate of return for commensurate risk on the measurement date.*

This proposed definition requires supporting guidance to enable reasonable and consistent judgments to be made about whether various possible trading situations may be presumed to meet the conditions of a market.

[126] For simplicity purposes this explanation assumes that the market transaction is in respect of an asset. A parallel explanation can be set out for a liability.

426. An observable market price may only be available for an asset or a liability that differs in some value-affecting respects from the asset or liability being measured on the measurement date. To qualify under Level 1, there would need to be a relevant and reliable basis for adjusting the observable market price for such differences. This requires that a price adjustment reliably reflect the adjustment that market participants could be expected to make for the effect of the differences.

427. Questions arise as to the fair value of an asset or liability when there is more than one market with different quoted prices for that asset or liability on a measurement date. This paper proposes that apparent differences in quoted market prices may be due to value-affecting differences between the assets or liabilities traded on these different markets, or to entity-specific costs that should be excluded from market prices. However, evidence indicates that multiple markets for some assets and liabilities do exist after adjustment for these factors, and that they may be the result of legal requirements or licensing arrangements that restrict access to certain markets. The paper proposes that an in-depth study be undertaken into apparent multiple markets with the objective of identifying and assessing the nature and causes of those differences, so as to be able to address their implications for accounting measurement purposes.

428. This paper proposes that the objective of fair value measurement is to represent the market value on the measurement date of the asset or liability being measured. If there is no observable market value for the asset or liability on the measurement date, the fair value objective is to estimate what the market value would be if there were a market, with appropriate adjustment for any limitations in liquidity. The objective of a fair value model is to replicate reliably the process that markets could be expected to use to estimate the market price of a particular asset or liability. Effective models are based on accepted market pricing principles, including present value methodologies and concepts of probability and risk. There are well-established models for measuring the fair value of many types of options and other derivatives, as well as certain primary financial instruments such as loans receivable and payable. In many cases, these pricing models have been developed by experts in finance and by financial institutions for the purpose of creating instruments for managing risks. There would seem to be fewer prospects for developing reliable fair value pricing models for non-contractual assets that are inputs to revenue-generating processes. However, this paper proposes that estimations of the fair value of property (including land, plant and equipment) based on valuation techniques employed by qualified property valuators on the basis of generally accepted valuation principles may meet the conditions of Level 2 when sufficient market data are available. This paper proposes that a project be undertaken by the IASB and national standard setters with the International Valuation Standards Committee to examine its standards and their application. This study would have the objective of evaluating how and when such valuations may be accepted to meet financial reporting measurement objectives (see paragraphs 269-275).

429. The reliability of fair value estimates using models or techniques depends not only on how well a particular model or technique replicates the market pricing process, but also on the reliability of its data inputs. The material inputs to a fair value model or technique must reliably reflect the estimates and assumptions that marketplace participants would use. In some situations, proxies or assumptions may be established that are generally accepted not to unduly compromise an estimation of fair value. In some other situations, the only recourse will be to use entity-specific estimations and assumptions when there is insufficient information

available about market expectations. There may be no effective basis for validating or refuting whether such entity-specific expectations are a reasonable proxy for market expectations. Since entity-specific estimates and assumptions that do not coincide with market expectations are inconsistent with the fair value measurement objective, this paper proposes that:

> *A measurement model cannot achieve a reliable estimation of the fair value of an asset or liability when it is significantly dependent on entity-specific expectations that cannot be justified to reliably represent market expectations.*

Thus, it is proposed that measurement estimates that are significantly dependent on entity-specific inputs should not be accepted as meeting the conditions of the proposed Level 2 for the estimation of fair value. However, there are situations in which the measurement of an asset or liability on initial recognition is possible only by using models or techniques that rely significantly on entity-specific estimates or assumptions that cannot be justified to coincide with market expectations. These are addressed under Level 4 of the proposed hierarchy below.

430. There is a difference of degree only between adjusting an observable market price for differences (Level 1) and using a measurement model that incorporates market-based inputs (Level 2). Adjustments under Level 1 must have a supportable basis — that is, a supportable model or technique — for estimating the adjustment that market participants could be expected to make to an observable market price.

### *Substitutes for Fair Value — Levels 3 and 4*

431. *Level 3 — Estimates of current cost: Failing the ability to estimate fair value with acceptable reliability (that is, to meet the conditions of Level 1 or 2):*

*(a) an asset should be measured on initial recognition at its current cost, provided that this amount can be reliably estimated and can be reasonably expected to be recoverable; and*

*(b) a liability should be measured on initial recognition at its current consideration amount, provided that this amount can be reliably estimated and can be reasonably expected to represent the amount owed.*

432. This paper proposes that current cost be interpreted to be replacement cost when replacement cost is reliably measurable, or failing its reliable measurement, to be reproduction cost when reproduction cost is capable of reliable measurement. When the above conditions for the measurement of current cost, or current consideration amount, are not met, this paper proposes that historical cost is an acceptable substitute when it can meet these conditions. It is further suggested that, for practical purposes, historical cost measurement might be accepted in lieu of current cost on initial recognition of an asset or liability absent persuasive evidence that a reliable measurement of current cost is practicable and would differ significantly from historical cost.

433. A cost basis should be applied as consistently as possible with the fair value measurement objective. It is proposed that such application should result in excluding transaction costs (as defined), and further study could lead to other adjustments.

434. *Level 4 — Models or techniques that depend significantly on entity-specific expectations: If the conditions of Level 1, 2 or 3 cannot be met, an asset or liability should be measured on initial recognition on the basis of an accepted model or technique. To the extent that reliable market-based data are unavailable, the measurement model or technique should use reliably estimable entity-specific data that are not demonstrably inconsistent with observable market expectations.*

435. Asset and liabilities that may have to be measured at Level 4 on initial recognition may be classified into two groups:

(a) Assets and liabilities that would fall into Level 3, except that their cost basis amounts cannot be expected to be recoverable, in respect of assets, or to reasonably represent amounts owing, in respect of liabilities.

(b) Assets and liabilities that fail the conditions for fair value estimation and for which cost basis amounts are not reliably determinable. Some assets and liabilities do not arise from transactions involving cash or cash-equivalent consideration. They may include liabilities for asset retirement obligations, claims arising from lawsuits, liabilities arising under defined benefit pension and other employee benefit plans, and some stock-based compensation plans. These assets and liabilities may be measured on initial recognition on the basis of present value estimates (see paragraphs 390 and 392). Alternatively, assets and liabilities may result from basket purchases. For example, work in-process inventories may be acquired as part of a business acquisition. In this case, a hybrid realizable value estimate may be appropriate when the asset's fair value cannot be reliably estimated (see paragraph 374).

436. The challenge for accounting standard setters is to develop standards for assets and liabilities with these characteristics that enable making relevant and reliable measurements that are as consistent as possible with the objectives of fair value and are supported by appropriate disclosures. Since these measurements do not meet the conditions for being described as fair value estimates, they should be described in more limited terms on the basis of the models or techniques used and sources of significant data inputs.

437. Levels 3 and 4 are consistent with the restated deprival value decision rule proposed in paragraph 408. Under that restated decision rule, when an asset cannot be reliably measured under Level 1 or 2 on initial recognition, it would be measured under Level 3 at its current cost unless its current cost is not reliably measurable or its recoverable amount is lower. When an asset's recoverable amount is determined to be less than its current cost on initial recognition, its recoverable amount would be estimated by reference to Level 4. If the application of measurement techniques under Level 4 resulted in different realizable value and present value amounts, then the most advantageous of the two amounts would be used.[127] A parallel restatement of the relief value decision rule may be set out for liabilities.

438. A change would be made in the level of the hierarchy on which a measurement is based, or in the techniques applied within a level, for a particular type of asset or liability when needed to achieve the best estimate of fair value, or closest substitute for fair value, on initial recognition. Such a situation could arise, for example, as a result of the development of new markets, the availability of improved valuation techniques, or changes in data availability, in respect of assets or liabilities that are acquired or incurred on a recurring basis by a reporting entity. Since such changes would be the result of changes in circumstances or experience, or new information, they are of the nature of changes in estimates. Accordingly, they would be accorded prospective application, with disclosure of the nature of the changes and the reasons for them.

439. The application of this hierarchy to the measurement of assets that are considered to be impaired requires additional analysis that is beyond the scope of this paper. Measurement of impaired assets is deferred to a later stage of this project.

[127] This would be the higher of the two amounts, subject to adjustment for different unavoidable transaction costs.

### *Non-Recognition — The Only Option When the Conditions of Levels 1-4 Cannot be Met*

440. While this paper does not deal with asset and liability recognition conditions, the implication of the above proposed measurement hierarchy is that, if none of the above measurement Levels can be applied, basic conditions for recognition of an asset or liability have not been met.

## Future Research

441. A number of issues have been raised that require research beyond the scope of this paper. The more significant areas in which further research is recommended are summarized as follows:

(a) This paper has focused on essential primary issues, with deferral for future study of what are considered to be secondary issues (listed at paragraph 12).

(b) This paper proposes research into the nature and causes of different prices in different markets for apparently similar assets and liabilities (paragraphs 137 and 182). Particular reference has been made to the nature and bases of (i) restricted-access markets and their implications for fair value measurement (paragraph 189), and (ii) differences in prices between entry (customer) markets and exit markets for demand deposits (paragraphs 172 and 173) and for warranty and some other performance obligations (paragraphs 174-177).

(c) This paper proposes further study of issues relating to defining the unit of account for measurement purposes on initial recognition (paragraphs 148-161).

(d) There is a need for further theoretical and empirical research into finance theory and market pricing principles and techniques, and into the conditions that may be considered to define "market" for the purposes of applying the market (fair) value measurement objective (paragraphs 107-110, 236-239 and 277). Particular questions include the minimum level of information and knowledge necessary for there to be a market for an asset or liability (paragraphs 240-241), and the implications of information asymmetry (paragraphs 183-187 and 265).

(e) The paper proposes that accounting measurement principles may be improved by study of the valuation theories, principles, standards and practices of professional valuation disciplines (paragraph 275). In particular, it is proposed that research be undertaken into replacement cost valuation techniques employed by professional property valuators (paragraph 356).

(f) The paper proposes that cost allocation bases literature and practices be re-examined within the context of the fair value measurement objective on initial recognition (paragraphs 318 and 319 and Appendix C).

In addition, further theoretical and empirical research into the information value of fair value estimates in comparison with other measurement bases, and on how market participants incorporate reliability into prices of assets and liabilities could be very helpful.

# Appendix A

## Glossary of Significant Terms Used

The following terms and their definitions are reproduced from the body of the paper.

*Asset*: An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.

*Current consideration amount (measure of a liability)*: The fair value of the consideration that the owing entity would have received if the liability had been incurred by it on the measurement date.

*Current cost (measure of an asset)*: The most economic cost of an asset or of its equivalent productive capacity or service potential.

*Current cost of performance (measure of a liability)*: The present value of estimated cash flows expected to be paid to satisfy a liability.

*Deprival value (measure of an asset)*: The loss that an entity would suffer if it were deprived of an asset. It is the lower of replacement cost and recoverable amount on the measurement date, with recoverable amount being the higher of value in use and net realizable value.

*Efficient market price*: The price that fully and without bias impounds all publicly available information.

*Entity-specific measurement*: A measurement of an asset or liability of an entity that is based on the expectations of management of the entity.

*Entry value*: A measure of the amount for which an asset could be bought or a liability could be incurred.

*Exit value*: A measure of the amount for which an asset could be realized or a liability could be settled.

*Fair value*: The amount for which an asset or liability could be exchanged between knowledgeable, willing parties in an arm's length transaction.

*Historical cost*: Assets are recorded at the fair value of the consideration given to acquire them at the time of their acquisition. Liabilities are recorded at the fair value of the consideration received in exchange for incurring the obligations at the time they were incurred.

*Liability*: A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

*Market*: A body of knowledgeable, willing, arm's length parties carrying out sufficiently extensive exchange transactions in an asset or liability to achieve its equilibrium price, reflecting the market expectations of earning or paying the market rate of return for commensurate risk on the measurement date.

*Net realizable value (measure of an asset)*: The estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. It is sometimes described as "net selling value" or "net market value".

*Recognition*: The process of incorporating in the balance sheet or income statement an item that meets the definition of an element and satisfies the criteria for recognition.

*Release amount (measure of a liability)*: The estimated amount that would be incurred in the ordinary course of business to be released from the liability on the measurement date plus the estimated costs necessary to secure that release.

*Relief value (measure of a liability)*: The higher of current consideration amount and repayment amount, with repayment amount being defined as the lower of the current cost of performance and the current cost of release from the liability.

*Re-measurement (of existing assets or liabilities)*: Measurements in periods following initial recognition that establish a new carrying amount unrelated to previous amounts and accounting conventions (sometimes referred to as a "fresh-start measurement").

*Replacement cost (measure of an asset)*: The most economic current cost of replacing an existing asset with an asset of equivalent productive capacity or service potential.

*Reproduction cost (measure of an asset)*: The most economic current cost of replacing an existing asset with an identical one.

*Transaction costs*: Incremental costs that are directly attributable to the acquisition, issue or disposal of an asset or liability and, for the purpose of measuring the fair value of the asset or liability, are not recoverable in the marketplace on the measurement date.

*Value in use (measure of an asset)*: The present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. The term has generally been used on the presumption that the objective is to reflect the reporting entity's, rather than the market's, expectations.

# Appendix B

## Note on Conceptual Frameworks

Paragraphs 30-54 of the paper summarize certain key aspects of the conceptual frameworks of the IASB and national standard setters in developing evaluation criteria for measurement bases. The frameworks are used for this purpose as they are; no attempt is made to evaluate the frameworks.

In general, the published frameworks[128] correspond quite closely to each other on those issues that they address in common (some frameworks cover more issues than others). However, the frameworks are not identical and some of the differences may be considered significant for some purposes. This note highlights certain differences in those portions of the frameworks that have been used in the paper as evaluation criteria for alternative measurement bases.[129] The following discussion does not address all aspects of the frameworks.

### B1. Decision Usefulness

All of the frameworks adopt as the objective of financial statements the provision of decision-useful information. They all acknowledge that there is a variety of different types of financial statement users with potentially differing information needs. However, there is some divergence on the question of whose needs should determine the content of financial statements of business entities (some frameworks also encompass non-business entities).

(a) The IASB framework lists a wide variety of potential users of financial statements, notes that there are information needs common to all users, and concludes that the provision of financial statements that meet the needs of investors will also meet most of the needs of others that financial statements can satisfy.[130]

(b) The Australian framework indicates that the objective of financial statements is to provide information that is useful for making and evaluating decisions about the allocation of scarce resources, which may suggest an investor/creditor orientation. However, it also discusses a wide variety of types of financial statement users and states that financial statements should satisfy the common needs of a number of types of user.[131]

(c) The Canadian framework mentions a wide variety of financial statement users but gives primacy to the needs of investors and creditors.[132]

(d) The New Zealand framework does not discuss different types of financial statement users and, accordingly, does not address the question of whose needs should be the focus of financial reporting.[133]

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[128] The published frameworks discussed in this appendix are those of the IASB (*Framework for the Preparation and Presentation of Financial Statements*, or "*Framework*"), Australia (*Statements of Accounting Concepts*, or "SACs"), Canada (Section 1000 of the *CICA Handbook*, denoted as "CICA"), New Zealand (*Statement of Concepts for General Purpose Financial Reporting*, or "SCGPFR"), the United Kingdom (*Statement of Principles for Financial Reporting*, or "SPFR") and the United States (*Statements of Financial Accounting Concepts*, or "CONs").

[129] This note is based in part on a commentary, "An International Comparison and Evaluation of Financial Accounting Concepts Statements" by Professor William R. Scott of the University of Waterloo, published in *Canadian Accounting Perspectives* (vol. 1, no. 2; 2002), and an unpublished paper discussed by the G4+1 group of standard setters, "Conceptual Framework Comparison" (Agenda Paper 7 and attachments for the January 2001 meeting).

[130] IASB *Framework*, paragraphs 9-10.

[131] SAC 2, paragraphs 16, 26

[132] CICA paragraphs 1000.11, .15.

[133] SCGPFR, section 3.

(e) The U.K. framework states that the objective of financial statements is to provide information that is useful to a wide range of users, but goes on to say that the objective can usually be met by focusing exclusively on the information needs of present and potential investors. This rebuttable presumption is based on the view that different types of financial statement users with differing purposes have overlapping information needs.[134]

(f) The U.S. framework lists a wide variety of potential users of financial statements but specifies that the objective of financial reporting should be to satisfy investors' and creditors' information needs.[135] The needs of other users will generally be satisfied by the information provided for investors and creditors.

Although there are differences, a clear majority of the frameworks give at least greater weight to the information needs of investors and creditors. Either explicitly or implicitly, the frameworks rely on the expectation that satisfying the needs of investors and creditors will generally satisfy the needs of other financial statement users as well.

### B2. Predictive Value, Feedback Value and Stewardship

Although the language differs from one framework to another, there are relatively clear statements in each one that identify both predictive value and feedback value as key aspects of the decision usefulness of financial statement information. They are described as principal aspects of the relevance of financial information. To the extent that some of the frameworks elaborate on these two aspects, they do not appear to introduce divergent views as to their meaning. The frameworks generally distinguish other aspects of decision usefulness, notably stewardship information. Some frameworks focus more on what type of information should be provided (financial position, performance, financing and investing activities, etc.) and less on what the information would be used for.

### B3. Qualitative Characteristics of Financial Information

All of the frameworks identify the following four qualitative characteristics of financial information: understandability, relevance, reliability and comparability. All of the frameworks also introduce other factors and assumptions, such as materiality, timeliness, cost/benefit considerations and going concern, that interact with the four principal characteristics or, in some cases, form elements of one of the four characteristics.

The IASB, Canadian, New Zealand and U.K. frameworks present the four principal characteristics as essentially parallel considerations, even though not necessarily of equal importance. The Australian and U.S. frameworks place the four principal characteristics in a more structured relationship to each other, and other factors, as follows:

(a) In the Australian framework, relevance and reliability are designated as the primary characteristics, dealing with the preparation of financial information. Comparability and understandability are described as dealing with the presentation of financial information.[136]

(b) The U.S. framework characterizes relevance and reliability as being the primary characteristics, but it also observes that it does not mean to assign priorities to the various characteristics. Understandability is described as a user-specific quality that stands between decision makers and the decision usefulness of information.

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[134] SPFR, chapter 1, principles and paragraphs 1.4-1.6, 1.10-1.11.

[135] CON 1, paragraphs 30, 32.

[136] SAC 3, paragraphs 7, 31, 36.

> Comparability is described as a secondary characteristic that interacts with relevance and reliability.[137]

All of the frameworks comment on the need to make trade-offs between characteristics. The IASB, Canadian and New Zealand frameworks call for a balance to be determined in specific circumstances through "professional judgment".[138] The U.S. framework gives precedence to relevance and reliability but indicates that trade-offs between those characteristics will depend on circumstances.[139] The Australian framework comments that relevance and reliability may need to be balanced against each other but neither is ranked above the other.[140] However, the U.K. framework gives primacy to relevance in any trade-off between characteristics,[141] and goes on to state:

> "... reliability is a hurdle to be cleared (i.e. is the information sufficiently reliable?), not a competition that has to be won (i.e. is this information the most reliable?). This means that the approach to be adopted ... will be the one that is the most relevant of those that are reliable."

### B4. Reliability of Financial Information

The frameworks exhibit some interesting variations in describing the component elements of reliability. Each framework sets out a set of such elements, which may be summarized as shown in Figure 1.

The following features of the frameworks' discussions of reliability are particularly noteworthy:

(a) All of the frameworks unequivocally state representational faithfulness as a separate element, and often as the first one. IASB and Australian frameworks state substance over form as a separate element, whereas the others view it as a feature of representational faithfulness. Representational faithfulness appears to have effectively the same meaning in all of the frameworks, even though expressed in somewhat different ways.

(b) Neutrality, or freedom from deliberate bias, is common to all of the frameworks and described in the same way.

(c) Prudence or conservatism feature in all of the frameworks. In the New Zealand and U.S. frameworks they are discussed as subsidiary factors rather than principal elements of reliability, but this difference of presentation alone does not appear to be particularly significant. The various frameworks all distinguish between the necessity of prudence in the face of uncertainty and the unacceptable practice of deliberately understating assets and revenues and overstating liabilities and expenses.

(d) Completeness is considered important by all of the frameworks, but it is included in them in a variety of ways. It does not appear that the differences would be significant in the application of the frameworks.

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[137] CON 2, paragraph 33 and figure 1.

[138] IASB *Framework*, paragraph 45; CICA paragraph 1000.24; and SCGPFR, paragraph 6.1.

[139] CON 2, paragraphs 33 and 90.

[140] SAC 3, paragraph 7.

[141] SPFR, chapter 3.

## Figure 1

## Elements of Reliability

| | IASB [1] | Australia [2] | Canada [3] | New Zealand [4] | United Kingdom [5] | United States [6] |
|---|---|---|---|---|---|---|
| Representational faithfulness | X | X[b] | X | X | X | X |
| Substance over form | X | X | f | f | f | f |
| Neutrality (freedom from bias) | X | X | X | X | X | X |
| Prudence / conservatism | X | X[c] | X | h | X | i |
| Completeness | X | X[d] | g | d | X | j |
| Verifiability (freedom from error) | a | X[e] | X | X | X | X |

X denotes that an element is present in a conceptual framework.

a Mentioned but not identified as a separate aspect of reliability.
b Distinguished from "effective representation", an element of relevance.
c Conservatism distinguished from prudence; only prudence considered an aspect of reliability.
d Dealt with through the materiality test.
e Emphasis on the role of audits.
f Considered an element of representational faithfulness.
g Considered an element of neutrality.
h Considered an "influence" on qualitative characteristics.
i Considered a factor influencing representational faithfulness and neutrality.
j Considered an element of both representational faithfulness and neutrality; also a factor in relevance of information.

1 IASB Framework, paragraphs 24-46.
2 SAC 3, paragraphs 16-30.
3 CICA, paragraphs 1000.21.
4 SCGPFR, paragraphs 4.9-4.12, 6.6 and 6.9.
5 SPFR, chapter 3, paragraphs 3.7-3.20.
6 CON 2, paragraphs 58-89, 91-110, 160.

(e) Verifiability is identified as a separate element of reliability by all of the frameworks except the IASB's.[142] The extent of verifiability for a particular item of financial information can be assessed according to the dispersion of a representative number of independent measurements of the underlying item being measured. The frameworks generally distinguish verifiability from neutrality.

[142] The IASB *Framework* mentions in its summary description of reliability (paragraph 31) that information is reliable when it is "free from material error", but it does not use the term "verifiability" or discuss the issue.

## B5. Elements of Financial Statements

All of the frameworks identify and define the elements of financial statements, generally in similar ways, although there are some noteworthy differences. One of the differences commonly observed is the distinction made in some of the frameworks, and not others, between revenues and gains and between expenses and losses. This and some other differences are not significant for purposes of evaluating alternative measurement bases.

The paper adopts the concepts of assets and liabilities, as defined in the frameworks, as important evaluation criteria for alternative measurement bases. Those two elements of financial statements are common to all of the frameworks, but they are not defined in the same manner. The various definitions are set out in Figure 2 (next page).

The following points about the definitions are particularly noteworthy:

(a) The U.S. framework includes probability in its definitions of assets and liabilities, and does not mention it in the recognition criteria (CON 5, paragraph 63). All of the other frameworks define assets and liabilities without reference to probability, and include it in the recognition criteria. As indicated in the footnotes to the U.S. definitions and explained in commentaries on the U.S. framework, "probable" is meant in the broad sense of "expected" and is not intended to convey any sense of statistical probability.

## Figure 2

## Definitions of Assets and Liabilities[143]

| | Assets | Liabilities |
|---|---|---|
| IASB | An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity. | A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits. |
| Australia | Assets are future economic benefits controlled by the entity as a result of past transactions or other past events. | Liabilities are the future sacrifices of economic benefits that the entity is presently obliged to make to other entities as a result of past transactions or other past events. |
| Canada | Assets are economic resources controlled by an entity as a result of past transactions or events and from which future economic benefits may be obtained. | Liabilities are obligations of an entity arising from past transactions or events, the settlement of which may result in the transfer or use of assets, provision of services or other yielding of economic benefits in the future. |
| New Zealand | Assets are service potential or future economic benefits controlled by the entity as a result of past transactions or other past events. | Liabilities are the future sacrifices of service potential or of future economic benefits that the entity is presently obliged to make to other entities as a result of past transactions or other past events. |
| United Kingdom | Assets are rights or other access to future economic benefits controlled by an entity as a result of past transactions or events. | Liabilities are obligations of an entity to transfer economic benefits as a result of past transactions or events. |
| United States | Assets are probable[18] future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.<br>_____<br>[18] Probable is used with its usual general meaning, rather than in a specific accounting or technical sense (such as that in FASB Statement No. 5, *Accounting for Contingencies*, par. 3), and refers to that which can reasonably be expected or believed on the basis of available evidence or logic but is neither certain nor proved (Webster's New World Dictionary of the American Language, 2nd college ed. [New York Simon and Schuster 1982], p. 1132). Its inclusion in the definition is intended to acknowledge that business and other economic activities occur in an environment characterized by uncertainty in which few outcomes are certain (pars. 44-48). | Liabilities are probable[21] future sacrifices of economic benefits arising from present obligations[22] of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.<br>_____<br>[21] Probable is used with its usual general meaning, rather than in a specific accounting or technical sense (such as that in Statement 5, par. 3), and refers to that which can reasonably be expected or believed on the basis of available evidence or logic but is neither certain nor proved (Webster's New World Dictionary, p. 1132). Its inclusion in the definition is intended to acknowledge that business and other economic activities occur in an environment characterized by uncertainty in which few outcomes are certain (pars. 44-48).<br>[22] Obligations in the definition is broader than legal obligations. It is used with its usual general meaning to refer to duties imposed legally or socially; to that which one is bound to do by contract, promise, moral responsibility, and so forth (Webster's New World Dictionary, p. 981). It includes equitable and constructive obligations as well as legal obligations (pars. 37-40). |

[143] The definitions in the table are all quoted directly from the frameworks.

(b) The IASB and Canadian frameworks define assets as resources that give rise to economic benefits. The U.K. framework defines assets as access to economic benefits. The Australian, New Zealand and U.S. frameworks define assets as the benefits themselves. It is unclear whether these differences in the definitions could lead to differences in what would be recognized or how an item might be described or presented in financial statements.

(c) Similarly, the IASB, Canadian and U.K. frameworks define liabilities as obligations to transfer economic benefits, whereas the Australian, New Zealand and U.S. frameworks define liabilities as the future sacrifice of economic benefits.

It has sometimes been argued that the different definitions might lead to different conclusions as to the most appropriate basis of measurement for assets or liabilities.[144] This paper takes the position that the definitions were not intended to require the adoption of any particular alternative measurement basis (or otherwise the conceptual frameworks would have so indicated). Although the differences noted above could have consequences for certain purposes, they do not necessarily lead to inconsistent results in defining or evaluating measurement bases. The most significant issue appears to be that noted in paragraph 15(a). The U.S. conceptual framework defines assets and liabilities as probable future economic benefits obtained or sacrificed, whereas market-based values factor the probability of obtaining or sacrificing economic benefits into the measurement of the asset or liability. In defining assets and liabilities, the FASB uses the term "probable" only in the sense of "reasonably expected", and not in the sense of statistical probability, which is the sense in which it is used in reference to market-based measurements.

### B6. Economic Purposes

None of the frameworks add much to the comments quoted in the paper from CON 1 concerning the presumed economic purposes of business enterprises. The U.K. framework makes similar comments (paragraph 1.10) in explaining why the information needs of other types of financial statement users will generally coincide with those of investors. Nothing in this section of the paper appears to conflict with any of the frameworks.

### B7. Concepts of Capital Maintenance

The IASB, Australian, Canadian and New Zealand frameworks each discuss capital maintenance concepts briefly and without specifying any particular approach. The U.K. and U.S. frameworks specify the application of the traditional financial capital approach.[145] The Australian framework does not include a statement dealing with measurement models, although considerable work has been undertaken towards developing one.

### B8. Cost/Benefit Constraint

All of the frameworks mention this constraint in discussing the qualitative characteristics of financial information, and none of them go beyond a general description of the trade-off between costs and benefits.

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[144] See Andrew Lennard, *Liabilities and how to account for them: an exploratory essay,* paragraphs 74-82, which discusses and rejects this argument.

[145] SPFR, paragraphs 6.39-6.42; and CON 5, paragraphs 45-48.

B9. Other Matters

The foregoing discussion relates specifically to the features of the conceptual frameworks that correspond to the basis of evaluation set out in paragraphs 28 to 54 of this paper. Some of the frameworks contain little or no specific discussion of the measurement bases identified in this paper, while others do. For example:

(a) The IASB and Canadian frameworks describe what measurement is, list some of the measurement basis identified in this paper, and comment that historical cost is most commonly adopted (IASB *Framework* paragraphs 99-101 and CICA paragraphs 1000.53-.54).

(b) CON 5 describes the application of exchange prices and current versus historical values in general terms (paragraphs 88-90). CON 7 states: "The only objective of present value, when used in accounting measurements at initial recognition and fresh-start measurements, is to estimate fair value ... (paragraph 25).

(c) The U.K.'s framework (chapter 6) discusses some of the alternative measurement bases identified in this paper and concludes that current values are necessary in some (specified) circumstances.

(d) The Australian framework does not include any positions on measurement issues, although the Australian Accounting Research Foundation's Accounting Theory Monograph 10 proposed a "relative current value" model that includes a version of the "value to the business" approach (deprival value for assets and relief value for liabilities).

(e) New Zealand's framework (section 9) contains a discussion of measurement bases similar to that in the IASB *Framework*, but goes on to express a preference for a "modified historical cost" system that provides for re-measuring certain non-current assets to current value (paragraph 9.9).

B10. Conclusion

The elements of the six published conceptual frameworks incorporated into the evaluation criteria for measurement bases exhibit a number of differences and variations. For the purposes of evaluating alternative measurement bases, there do not appear to be any outright conflicts or major differences in approach that would necessarily lead to different conclusions under one framework from those under another.

# Appendix C

## Some Considerations on Determining Cost as a Substitute for Fair Value on Initial Recognition

C1. Under Level 3 of the measurement hierarchy proposed in this paper, assets and liabilities would be measured on initial recognition on a cost basis (current or historical cost) under certain conditions when fair value cannot be estimated with acceptable reliability. In particular, it seems likely that non-contractual assets that are self constructed or adapted for specialized use would commonly be measured on initial recognition on a cost basis. This paper proposes that methods for attributing costs to assets and liabilities on initial recognition be selected to be as consistent as possible with the fair value measurement objective. It further suggests that existing cost attribution standards and practices be re-assessed in the context of this objective.

C2. This appendix explores some possible implications of the fair value measurement objective for re-assessing cost attribution standards and practices. Its purpose is not to resolve issues, but to serve as a preliminary indication of possible lines of inquiry that, if considered to be potentially fruitful, would require in-depth study.

### Interest Capitalization

#### *The Cost Perspective*

C3. One of the fundamental questions of cost determination is whether and, if so, how interest should be capitalized on non-contractual assets that take some time to make ready for use or sale. Three different views on interest capitalization may be identified within the historical cost basis:

(a) Some reason that interest on debt used to finance an asset during the period that it is being made ready for use or sale is a necessary part of the cost to acquire it.[146]

In their view, not capitalizing this interest would bias the measurement of the asset by systematically understating its cost. Acceptance of this view gives rise to the following measurement application issues:

(iii) Identifying those assets on which interest should be capitalized and when capitalization should begin and end.

(iv) Attributing liabilities to these assets. A number of different approaches to attributing liabilities to assets have been put forward; in most cases, these are subject to "many-to-many" allocation problems.[147]

(v) Measuring the interest on attributed liabilities. Current standards require interest to be determined on the historical cost "effective interest" basis. It may be reasoned that it would be more consistent with the fair value measurement objective to capitalize interest on attributed liabilities at the market value of interest for commensurate risk during the capitalization period. Capitalizing

[146] FASB Statement 34, *Capitalization of Interest Cost*, takes the position that interest on debt should be capitalized as part of the cost of certain qualifying assets during the period of time required to get them ready for their intended use.

[147] FASB Statement 34 concluded that it is legitimate to capitalize an apportionment of interest on all debt outstanding that might theoretically have been paid off were it not for the qualifying asset(s) under construction.

interest on this fair value basis may also be argued to be more consistent with the accepted objective of historical cost - to reflect "the fair value of consideration given" to acquire an asset at the time of its acquisition (paragraph 77).[148]

(b) Some others believe that interest on debt is payable for the use of money for a period, and should be recognized as an expense in that period.[149] They do not believe that the cost of an asset should differ depending on how or when it is financed. This, they reason, can seriously impair comparability between entities and over time within an entity. Some oppose capitalizing interest on debt because, in their view, it confuses financing and operating costs, and distorts operating profitability.[150] Further, some object to capitalizing interest on debt because it commonly requires arbitrary allocations in attributing debt to particular assets (the many-to-many allocation problems referred to in (a)).

(c) A third school of thought holds that interest should be capitalized on the basis of a broad concept of economic cost. Supporters argue that the objective should be to record the full economic sacrifice incurred in constructing an asset. In their view, this sacrifice includes not only the interest on borrowing that is attributed to the asset, but also any additional return forgone because the construction was undertaken. The benefit of this return would, they reason, have accrued to increase equity in the absence of the investment in the construction of the asset. The FASB accepted that such sacrifice is part of the economic cost of the asset. However, it concluded in Statement 34 that the capitalization of the return forgone is outside the transactions-based historical cost model, because the cost would have to be imputed rather than being the result of an exchange transaction.[151] In support of this conclusion, it may be argued that the return forgone does not fit within the definition of "historical cost", because it is not "consideration given". However, others may argue that the true measure of the fair value of consideration given to acquire an asset includes a reasonable measure of any return forgone.

### *The Fair Value Perspective*

C4. The fair value of an asset whose benefits consist of future cash inflows can be expected to increase at the available market rate of return as the time to the realization of its cash flows grows shorter, all other things being equal. This is the simple consequence of the present value principle in the marketplace, under which expected cash flows become more valuable (have a higher present value) the closer they are to realization. This is evidenced by the fact that investors in a competitive market expect to be compensated at the current risk-adjusted market rate for deferring receipt of cash (in making a loan, for example).

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[148] See paragraph 310, which questions the representational faithfulness of an historical cost measure of an asset that is based on aggregating costs of inputs that were purchased at various times in the past, and therefore may not be representative of the fair value of consideration given at the time the asset is constructed.

[149] IAS 23 adopts this position as its benchmark treatment (paragraphs 7-8). However, it permits, as an allowed alternative, capitalization of "borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset ..." (paragraph 11).

[150] See Stephen H. Penman, *Financial Statement Analysis and Security Valuation,* 2001, page 280.

[151] Nonetheless, some regulated public utilities in North America have capitalized a return on equity capital as well as debt interest in respect of assets under construction, reasoning that their revenue rate base allows a return on equity capital. See FASB Statement No. 71, paragraphs 15 and 82-84.

C5. This fair value return expectation has direct application to non-contractual assets that take time to construct and make ready for use or sale. Such an asset requires investment of funds for a period of time before the asset will be in a position to generate, or contribute to the generation of, cash inflows. Thus, the asset's fair value on initial recognition[152] can be expected to include the market return for forgoing the receipt of cash inflows for the period necessary to make the asset ready for use or sale.[153] In other words, the market price for such an asset can be expected to include compensation for the time value of money and attendant risks through the construction period.

C6. Capitalizing interest at the market rate of return on an asset that is under construction is consistent with the "economic cost" approach described in paragraph C3(c), interpreted within fair value measurement theory.

C7. The fair value measure of interest to be capitalized would be based solely on the asset's recorded value and risk during the period of construction. As a result, the amount capitalized would not depend on how the asset has been financed.

C8. It is emphasized that capitalizing interest at the market rate of return for an asset under construction would not make a cost-based measurement under Level 3 of the proposed hierarchy equivalent to fair value. The resulting measurement would often differ from fair value on initial recognition, because it would not reflect any effects of input price changes during the construction period, nor would it reflect synergies that may result from combining inputs in constructing the asset. Further, the market rate of interest would be multiplied by the accumulated costs of inputs used in constructing the asset, and therefore would not be a true measure of the market return factor. The resulting measurement would, therefore, still be a cost-accumulation basis substitute for fair value that has been extended to capitalize interest on a basis that is as consistent as possible with how market participants could be expected to price the interest effect.

C9. The analysis to this point would seem to support a presumption that the fair value capitalization of interest in measuring cost under Level 3 of the proposed hierarchy is more consistent with the fair value measurement objective than the alternatives discussed in paragraph C3. However, many may be uncomfortable with the result — in particular, that capitalizing interest on this fair value basis will result in a credit to net income or directly to equity during the period in which an asset is being prepared for use or sale. Is there a convincing basis for recognizing this credit in net income?[154]

C10. In considering this question, it should first be observed that, if the market value of a self-constructed asset is reliably measurable on initial recognition, this market value will include this gain. The recognition of this gain in net income or directly in equity necessarily follows from adopting the fair value measurement basis on initial recognition. The gain's recoverability is evidenced by the asset's market value on initial recognition.

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[152] This paper has defined "initial recognition" to include any time period necessary to make an asset ready to contribute to the generation of future cash flows (see paragraph 68).

[153] Other market factors (for example, input price changes and changes in the expected cash flows to be generated by the asset) may overwhelm the interest effect in some situations, but the market interest effect still occurs.

[154] Some may argue that this is a question for consideration in a project on reporting comprehensive income, which is beyond the scope of this paper. However, acceptance of the fair value measurement objective on initial recognition of assets carries with it implicit acceptance for recognizing income from any gains that arise when the fair value of an asset exceeds the amount paid for it.

 

C11. When the asset's fair value is not reliably measurable on initial recognition, substituting a cost measure that capitalizes interest at the market rate of return results in a similar credit to net income or directly in equity. In recognizing this gain, the entity is being given credit for the estimated return that the market would expect to be paid for the time value of money and attendant risks pertaining to the construction period. In this case, however, there will be no reliable market value to establish the gain's recoverability. The use of cost as a substitute for fair value under Level 3 of the proposed hierarchy is conditioned on it being reasonable to expect that the amount is recoverable. However, since there is no reliable fair value for the asset, this judgment must depend on entity-specific expectations.

C12. Some may believe that an entity-specific expectation of recoverability is not a sufficient basis for recognizing an increase in net income or a direct increase in equity on the initial recognition of an asset. However, any capitalization of interest, even if restricted to interest on debt financing, results in a credit to net income or directly to equity. Whether the credit can be offset against interest expense or is presented as a separate gain would not seem to be a compelling reason in itself for rejecting an interest capitalization basis. Further, it may be noted that all other attributions of cost to a self-constructed asset under Level 3 are subject to the same entity-specific recoverability condition. If the measure of cost, including interest capitalized at the market rate of return, is considered to be conceptually justifiable, the assessment of recoverability would not seem to give rise to any additional issues that would provide a compelling argument for excluding the interest component.

C13. In summary, it is proposed, based on the above analysis, that the case for capitalization of interest at the market rate of return has sufficient conceptual merit to warrant its consideration by standard setters.

C14. A logical extension of the principle of capitalizing interest at the market rate of return on assets under construction may be contemplated with respect to accounting for assets subsequent to initial recognition. Similar questions with respect to the effects of interest arise, for example, in depreciating fixed assets that are expected to contribute to the generation of cash inflows over a period of time. In other words, since cash flows to be received in the more distant future are less valuable than those to be received in the nearer term, a logical case may be made that depreciation provisions should reflect the effects of the time value of money.[155] Some have advocated that accounting for depreciable assets would be substantially improved if present value-based principles parallel to interest capitalization at market rates of return were applied in determining depreciation.[156] Capitalization of interest at the market rate of return on assets under construction is, in their view, just one of the important implications of rational time value of money principles for financial accounting. They believe that these implications should be considered together in order to have a coherent, internally consistent, accounting model.

### Transaction costs

C15. Transaction costs, as defined at paragraphs 193-200, are excluded in measuring the fair value of an asset or liability on initial recognition because market participants will not compensate the acquirer or issuer for those costs. The recognition of transaction costs as expenses is, however, inconsistent with the traditional concept of cost-based measurement of an asset or liability on initial recognition because transaction costs are generally considered to be part of the fair value of consideration given or received in exchange for an asset or a liability.

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[155] CON 7 discusses "interest methods of allocation" at paragraphs 89-95.

[156] See Ross M. Skinner and J. Alex Milburn, *Accounting Standards in Evolution*, 2nd ed., pages 198-205, and sources cited therein, for a discussion of interest-adjusted depreciation.

C16. Acceptance of the fair value measurement objective on initial recognition seems to put the traditional thinking on transaction costs in a different light. Under Level 3 of the proposed hierarchy, cost would be used as a substitute for fair value when certain conditions are met. One condition is that the measure of cost should be expected to be recoverable (in the case of an asset) or to represent reasonably the amount owed (in the case of a liability). It is reasoned that, since transaction costs are not recoverable in the marketplace, cost should be defined to exclude them for the purposes of applying Level 3 of the proposed hierarchy. In other words, it is proposed that when cost is used as a substitute for fair value on initial recognition, its recoverability should be judged, to the extent possible, in terms of fair value (market) expectations.

### Government grants to acquire assets

C17. In some countries, governments have provided various forms of grants to subsidize entities' investments in certain assets. For example, in a number of countries, government grants have been used as incentives for entities to construct plant and equipment in disadvantaged areas or for certain manufacturing purposes. Accounting standards in a number of jurisdictions have required such grants to be accounted for on the basis of the proprietary cost theory. On this basis, such grants would either be netted against the consideration paid for the asset, to reflect the net cost to the owner, or treated as a deferred credit to be amortized on the same basis as the asset so as to achieve the same reported net income as the net asset treatment.[157]

C18. Adopting the fair value measurement objective on initial recognition would result in quite a different approach. The fair value of an asset on initial recognition would be affected by a government grant only to the extent that the terms of the grant restrict use of the asset to less than what would otherwise be its highest and best use in the marketplace, in which case market participants could be expected to pay something less than the market price of an identical asset with no restrictions on its use. (If, in addition to restricting the use of the asset, the terms of the grant imposed a liability on the entity, then such liability would be separately recognized and measured on initial recognition.) Reported net income on initial recognition of the asset would then include the grant received, the effects of any differences between the fair value and cost of the asset and of any liability recognized. When fair value is not capable of reliable estimation on initial recognition, then, in accordance with the hierarchy proposed in this paper, a substitute measure applied as consistently as possible with the fair value objective would be used. The best substitute may be cost, or a lower recoverable amount if restrictions on the asset's use reduce its recoverable amount below cost. Depending on the circumstances, such measurement of the asset on initial recognition could be quite different from the amount resulting from simply netting the grant against the asset.

### Non-monetary exchanges

C19. The general rule in financial accounting has been that non-monetary exchanges (barter transactions) that are considered to have substance are to be measured at the fair value of the asset acquired or the fair value of the asset given up, whichever is more reliably measurable. Reasoning within the fair value measurement objective, the fair value of the asset acquired should be used when it can be estimated with acceptable reliability. The fair value of the asset given in exchange is at Level 3 of the hierarchy proposed in this paper, and would be used only when the fair value of the asset acquired is not capable of reliable estimation. Of course, when the two measures of fair value are the same, this is not a consideration. When neither the fair value of the asset acquired nor of the asset given up is capable of reliable estimation on the date

[157] See, for example, IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance.*

of the transaction, and a reliable Level 4 measurement is not possible, then presumably the asset acquired would be measured at the carrying amount of the asset given up. In that case, no recognition would be given to a new initial measurement, that is, the new asset would simply be substituted for the asset given up.

### Summary

C20. This appendix suggests that some issues of traditional cost measurement may warrant re-thinking in light of the proposed fair value measurement objective on initial recognition of assets and liabilities, and the proposed use of cost is as a substitute for fair value when the fair value of an asset or liability is not reliably measurable on initial recognition. Four possible areas for consideration have been identified and briefly discussed in this appendix, and there may be others.

# Appendix D

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