

# Toward a Measurement Framework for Financial Reporting by Profit-Oriented Entities

J. Alex Milburn, PhD, FCA





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# Abstract

This paper's proposals for developing a measurement framework for financial reporting by profit-oriented entities are founded on fundamental premises about economic business purposes, financial reporting objectives, and the role of markets and market prices. It envisages profit-oriented (business) entities as processes for transforming market input values into market output values. This leads to the conclusion that market values should be expected to play a critical role in financial reporting measurement theory. The paper proposes a definition of current market value as the present exchange price determined, on the basis of publicly available information, by the competitive interaction of willing buyers and sellers in an open, active and orderly market. It is proposed that current market value, so defined, embodies a set of properties that make it the ideal (most relevant) measure of assets and liabilities for financial reporting purposes. Other commonly advocated measurement bases are examined and demonstrated to lack one or more crucial properties of current market value. Certain other measurement bases can embody some significant relevant properties, however, so that they may be evaluated as possible substitutes when current market value is not practicable of faithful representation.

The paper reasons that measurement for financial reporting purposes is crucially dependent on determining when an entity should be recognized to have created economic value. The paper proposes that two conditions must be met: (1) the entity must have achieved an output that has a current market value that is practicable of faithful representation, and (2) the entity must have generated the good or service that is the source of that market value. It is deduced from this that assets that are inputs to entity cash-generating processes should be measured at their current market prices in the markets in which they would be acquired or, when such prices are not practicable of faithful representation, on the basis of the closest (most relevant) substitutes for these current market values that are practicable of faithful representation. Parallel principles are proposed for operating liabilities, and investing and financing assets and liabilities, and the implications of these principles for recognizing and measuring impairment are assessed.

The approach proposed in this paper would have major implications for financial reporting measurement. The paper, supported by an extensive appendix, endeavours to identify and address the most fundamental of these implications, and to examine critical premises and assumptions, issues and alternative views and arguments that have been, or may be expected to be, expressed in response to these proposals. It is hoped that this paper will help to stimulate a long overdue rigorous reexamination of financial reporting measurement theory. The paper is premised in the belief that substantial improvement in the conceptual underpinnings of financial reporting measurement is possible, and urgently needed.

**Key words:** Conceptual framework; efficient markets; fair value; accounting measurement; market value



# An Invitation to Comment and Participate in Debating the Issues

Significant progress towards developing an improved measurement foundation for financial reporting seems likely to be possible only through thorough intensive study and vigorous debate that involves representatives of all stakeholders across the full range of relevant knowledge and expertise. No individual can be expected to have the full necessary knowledge base.

This research paper is published by the Canadian Institute of Chartered Accountants (CICA) at the request of Canada's Accounting Standards Board (AcSB), to stimulate the study and debate, and to provide input for the International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB). The paper sets out the views of its author and has not been deliberated by any CICA committee. Accordingly, it does not necessarily reflect the views of the CICA.

Accountants, both academic and practicing, and all others who have an interest in the improvement of financial reporting measurement principles are invited to study this paper and submit their questions, comments and ideas. To facilitate this:

- The paper is available for downloading free of charge at [www.cica.ca/measurement](http://www.cica.ca/measurement).
- Following this paper is a set of questions that may help respondents focus their thoughts and facilitate discussion and sharing of views. However, respondents should not feel compelled to address all these questions; comments on other related issues of particular concern to individual readers are welcome.
- Respondents should email comment letters to CICA at [measurement@cica.ca](mailto:measurement@cica.ca) or mail them to:

The Canadian Institute of Chartered Accountants  
277 Wellington Street West  
Toronto, Ontario  
Canada  
M5V 3H2  
Attention: Alex Milburn, PhD, FCA

Comments received will be posted on the website, unless a respondent specifically requests otherwise.

In addition to sending comment letters to the CICA, respondents are invited to participate in an online discussion directly with the author on his blog at <http://measurementframework.blogspot.ca/>, where he intends to respond to comments, hopefully encouraging further exchanges.

Citations, including abstracts of, and links to, relevant literature, for example, articles in academic journals, are welcomed to encourage wider consideration of the issues, arguments and evidence. It is hoped that the website and blog will provide a useful resource for further research, and possibly for education purposes.

- The paper and an analysis of comments received will be provided to the IASB/FASB conceptual framework measurement project team for its consideration when that project is re-activated.

While there is no fixed deadline for the submission of comments, it would be helpful if comments could be received by November 30, 2012. A decision will be made at that time whether to continue or wind up the website and blog.

Chris Hicks, CA  
Principal  
The Canadian Institute of Chartered Accountants

# Preface

## The challenge

This paper is an attempt to reason as rigorously as possible, from fundamental premises about economic business purposes and financial reporting objectives, toward a measurement theory for financial reporting by profit-oriented entities. The author endeavours to identify and explicitly address fundamental premises, critical assumptions, and relevant arguments, and meld them into a coherent framework.

It would seem, from some prominent accounting literature, that many consider this to be an impossible task. The author disagrees; this paper is founded in the belief that significant developments have taken place in recent years that enable fresh insights that, put in perspective, can provide the basis for a promising new beginning.

Various measurement theories have been put forward over the years and some continue to have strong advocates. But, there has been a lack of rigorous, informed, debate among the proponents of these theories that takes into account developments in market pricing theories and evidence, and the implications of, for example, probability theory, risk management, and present value principles.

This paper proposes an approach to the development of a measurement framework that attempts to integrate these developments and implications. It is proposed that this framework provides a conceptual foundation that holds promise for enabling a substantial improvement over the inconsistent and unintegrated mix of measurement theories and pragmatics that underlie existing accounting standards and practice.

But it is also recognized that, realistically, traditional beliefs, long-held and applied, are unlikely to yield easily to the thinking proposed in this paper. The proposed principles would have to survive extensive and intensive critical examination and attacks from all conceivable opposing positions, before they could merit acceptance.

What is needed, then, is a rigorous, informed debate. This paper is put forward as a starting point to facilitate this debate. It presents an overarching theory that has at its centre a proposed measurement ideal (“reasonably efficient market value”). The attributes of other measurement bases may be examined against the attributes of this proposed ideal, as well as against each other.

## Appreciation

The completion of this paper owes much to many people.

First, I dedicate the paper to Ian Hague, former senior Principal of the AcSB, who, tragically, passed away in 2010, when he still had so much more to give. Ian and I worked closely together researching, working with leaders in the international standard-setting community, and drafting two major international studies on accounting for financial instruments – the joint International Accounting Standards Committee and CICA’s discussion paper on *Accounting for Financial Assets and Financial Liabilities*, issued in 1997; and the Financial Instruments Joint Working Group of Standard Setters *Draft Standard, Financial Instruments and Similar Items*, issued in 2000. Ian was also a major contributor working with me on the AcSB staff-prepared discussion paper, *Measurement Bases for Financial Accounting – Measurement on Initial Recognition*, which was issued by the IASB for comment in 2005. The seminal ideas for a measurement framework were the result in large part of our efforts on these three projects. Ian’s dedication and enthusiasm continue to be an inspiration to me.

I am also particularly indebted to Peter Martin, Director, Accounting Standards of the AcSB, whose patient support and constructive comments throughout the entire process have been instrumental in enabling me to undertake and complete this project. I also very much appreciate the vital support for this project provided by Ron Salole, Vice President, Standards of the CICA.

In addition, I express my appreciation to the following individuals who have been particularly helpful in their support and comments on the various drafts of this paper: Paul Cherry, who provided helpful comments on every draft; Kevin Stevenson, who provided in-depth analysis and exchanged views with me on early drafts, which influenced my thinking more than he may know; Andreas Bezold, who took the time to meticulously explain why he thoroughly disagreed with fundamental aspects of my proposals and, in so doing, helped me to better understand and, hopefully, better address important arguments that underlie a commonly held point of view; Tom Linsmeier, for his encouragement to see this project through; Jerry Gerard, for his literature research skills; Tom Scott, for his enthusiastic support and hosting of a workshop that included a draft of this paper; and Andrew Lennard and Bill Scott, for their helpful comments.

Finally, I am most indebted to my wife, Joan, for her steady and loving support, and unfailing confidence in me, throughout this project, and all the others that preceded it.

J. Alex Milburn

# Summary

This paper proposes an approach to developing a conceptual measurement framework for financial reporting by profit-oriented entities.

The approach is founded on the premise that profit-oriented business operations involve processes for transforming input market values into output market values. Profit-oriented entities operating in free-enterprise, market-based economies acquire assets and incur liabilities at values that are largely determined by competitive market forces. The success or failure of a business entity is determined by its ability to employ these assets and liabilities in its operating, investing and financing activities to create additional economic value that is ultimately realized in the market place.

Current market prices may, therefore, be expected to have a critical role in financial reporting measurement theory. The development of this role requires a clear definition of current market value. The following definition is proposed:

The current market value of an asset or liability is its present exchange price determined, on the basis of publicly available information, by the competitive interaction of willing arm's-length buyers and sellers in an open, active and orderly market.

It is proposed that reasonable market efficiency in its semi-strong form is the essence of what current market value represents. Reasonable market efficiency is reasoned to imbue current market value with properties that make it the ideal (most relevant) measure of assets and liabilities for financial reporting purposes. The paper sets out and examines these properties. The implications of the market price of an asset or liability for entry or exit values arise when the perspective of the entity that owns the asset or owes the liability is introduced.

The paper proposes six principles that differentiate between operating, and investing and financing assets and liabilities.

## **Business operating assets**

Principle 1 proposes a general principle for the recognition and measurement of market value created by entity cash-generating processes (revenue).

Market value created by a cash-generating process (revenue) should be recognized when the process (1) has achieved an output that has a current market value that is practicable of faithful representation, and (2) has generated the good and/or service that is the source of that output market value.

The assets (outputs) achieved under proposed Principle 1 would immediately be either input assets (for example, receivables that are inputs to the entity's customer credit financing process), or investment or financing assets.

Principle 2 proposes a general principle for the measurement of input assets.

Assets that are inputs to a cash-generating process should be measured at current prices in the markets in which the inputs would be acquired by the entity or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values or in substitute measurement bases that reflect current input values would be reported immediately in the statement of income.

The measurement of input assets on the basis of proposed Principle 2 would not anticipate value that is yet to be created by an entity's cash-generating process. The principle envisages the continuous remeasurement of input assets at their current prices in the markets in which their inputs would be acquired (or most relevant current cost-based substitutes) when such re-measurements are practicable of faithful representation, with holding gains and losses recognized immediately in income. These holding gains and losses are distinguishable from value created by entity cash-generating processes and would be recognized in income.

The term "practicable of faithful representation" is intended to mean capable of faithful representation and practical of cost-effective application. The paper proposes that, to be a faithful representation, the application of a measurement basis to an asset or liability should result in a number that can be demonstrated to reasonably represent the essential properties of that measurement basis within a range of materiality that is relevant to users in the context of the reporting entity's financial report.

Under proposed Principle 2, when the current price in the market in which an input asset would be acquired is not practicable of faithful representation, other measurement bases would be looked to as a possible substitute. The most relevant substitute measurement basis for an input asset (the basis that can most nearly reflect properties of current market value) that is practicable of faithful representation would be selected. The paper evaluates the relevance of current market value against the relevance of historical cost, historical market value, fair value, current replacement cost, deprival value, and current reproduction cost. Each of these measurement bases lacks some significant properties of current market value, but each has some claim to relevance as a possible substitute under Proposed Principle 2. The paper does not attempt to judge the relative merits of these bases as substitutes for current market value, because these judgments will be situation specific, that is, they will require assessments of their comparative relevance and practicability of

faithful representation for particular assets in differing circumstances involving differing cost-benefit considerations.

### **Business operating liabilities**

Principle 3 proposes that:

Except as provided by Principle 4, business operating liabilities should be measured at current prices in the markets in which the liabilities were issued or incurred or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values, or in substitute measurements that reflect current values, would be immediately reported in the statement of income.

Proposed Principle 3 parallels proposed Principle 2 on measuring input assets, in that these liability prices would not reflect any value that is yet to be created by the reporting entity's cash-generating processes. Although the current market prices proposed in Principle 3 are prices in entry markets, they measure the amounts that the reporting entity would expect to pay to fulfill these obligations, except when the conditions of proposed Principle 4 are met.

Principle 4 proposes conditions for measurement at lower current settlement amounts.

Business operating liabilities should be measured at current prices in markets in which they could be settled prior to maturity when such prices are lower than would be determined under Principle 3, if these prices could be achieved without additional cost to the entity (other than transaction costs) and are practicable of faithful representation.

### **Investing and financing assets and liabilities**

Investing and financing assets and liabilities are distinguished from business operating assets and liabilities because they are not part of a cash-generating process. Rather each is a stand-alone asset or liability that has been acquired, issued or incurred with the expectation of generating returns or costs resulting from interest, dividends or changes in market value.

Principle 5 proposes that:

Investing and financing assets and liabilities should be measured at current prices in the markets in which they were acquired, issued or incurred or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values, or in substitute measurements that reflect current values, should be immediately reported in the statement of income.

The market in which an investing or financing asset or liability was acquired, issued, or incurred is both its entry and exit market from the perspective of the reporting entity. Thus, Principle 5 can be framed in identical terms to proposed Principles 2 and 3 on input assets and operating liabilities, because all three principles look to prices in their respective input markets. An entity should not be expected to achieve income by “trading up” to a different market from that in which it acquired, issued, or incurred investing or financing assets or liabilities, unless these assets or liabilities are really inputs to some operating process and the conditions proposed in Principles 1 or 4 are met. As discussed in the paper, some financial assets and liabilities may be business operating assets and liabilities.

### **Impairment**

Individual input assets measured at current prices in the markets in which they would be acquired will require no adjustments for impairment. However, an input asset accounted for on the basis of a cost-based substitute will require a provision for impairment if it is evident that its ability to contribute to the generation of future cash flows is so impaired that its input contribution value is less than its carrying amount. The appropriate measure of this ability will depend on the type of input asset.

An additional impairment test is proposed at the level of the cash-generating unit.

Principle 6 proposes that:

The sum of the carrying amounts of business operating assets (less liabilities) comprising a cash-generating unit should not exceed the current market value of that cash-generating unit or, if that market value is not practicable of faithful representation, of a current value substitute that is practicable of faithful representation.

It is suggested that a provision for the impairment of a cash-generating unit be treated as a “negative goodwill” offset allowance against the business operating assets less liabilities that comprise the cash-generating unit.

### **Supporting disclosures**

A valid numerical representation of an uncertain economic phenomenon requires disclosure of information in addition to its estimated single point measurement. This includes information about the measurement basis (how that single point measurement was determined) and the uncertainty about that measurement. In particular, it is proposed that measurement substitutes for current market value be clearly distinguished from current market value, and that information be provided about their more limited properties, key assumptions, and significant measurement uncertainties.

## Implications and evaluation

In summary, this paper proposes an approach to developing an overarching measurement framework for financial reporting that flows from the relevance of current market value, as defined above. The proposed approach differs from existing standards and practices in its definition of current market value (in comparison with “fair value”), and in its proposals for where relevant markets are to be found for business operating, investing and financing assets and liabilities, and in its proposals for evaluating other measurement bases as possible substitutes when the current market value ideal is not practicable of faithful representation.

These proposals are controversial, and may be expected to be vigorously disputed by advocates of other measurement bases. The paper and supporting Appendix have endeavored to identify and address the major implications, issues, and alternative views that have been, or may be expected to be, expressed in response to these proposals. Supporting notes in the Appendix include discussions of relevance and faithful representation in a measurement context, the role of markets and market efficiency, and input asset price change effects, as well as comments on current market value in comparison with fair value, on historical market value, current replacement cost, deprival value, current reproduction cost, and present value models, and on capital maintenance implications, and economic theories of the firm and business models.

It is hoped that this paper will stimulate a long overdue rigorous reexamination of financial reporting measurement theory. It is premised on the belief that substantial improvement in the conceptual measurement underpinnings of financial reporting is possible and urgently needed.



# Toward a Measurement Framework for Financial Reporting by Profit-Oriented Entities

1. This paper proposes an approach to developing a measurement framework for financial reporting by profit-oriented entities. It is reasoned from a set of fundamental assumptions (premises) relating primarily to financial reporting objectives, the economic purpose and value-creating processes of profit-oriented entities, and the role of markets and market prices in determining the outcome of the economic activities of profit-oriented entities.<sup>1</sup>
2. Part I briefly discusses the objective of a conceptual framework, why achievement of the measurement component of this objective has been so elusive, and areas of development that may improve prospects for greater success than has been possible in the past. Part II introduces the premises from which the proposed approach is reasoned. The principles proposed in this paper assign a critical role to current market prices. Part III proposes a definition of “current market value” and its essential properties for financial reporting measurement purposes. Part IV then proposes an approach to developing a coherent measurement framework for financial reporting through a set of proposed principles. Finally, Part V sets out some summary considerations.
3. The paper attempts to set out and explain the framework of proposed principles in as concise and straightforward a manner as possible, so that its basic dimensions and directions can be clearly seen. This has been attempted by placing in-depth analyses and discussions of underlying concepts, supporting and opposing arguments, and other consequential issues in an extensive Appendix. The basic areas of analysis included in the Appendix are referenced from the pertinent parts of the paper. The paper’s proposals cannot be fully appreciated and informatively evaluated without studying the matters analyzed in the Appendix.

## I. A COHERENT MEASUREMENT FRAMEWORK OBJECTIVE – MISSION IMPOSSIBLE?

4. The IASB and FASB have underway a joint project to develop an improved conceptual framework for financial reporting, with the following objective:

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<sup>1</sup> The focus on profit-oriented entities is consistent with the scope and authority of International Financial Reporting Standards (IFRSs). See paragraph 9 of the *Preface to International Financial Reporting Standards* (IASB, 2002).

“A common goal of the boards – a goal shared by their constituents – is for their standards to be clearly based on consistent principles. To be consistent, principles must be rooted in fundamental concepts rather than a collection of conventions.”<sup>2</sup>

5. This goal is far from realized in the measurement of assets and liabilities. Existing standards and practices consist of a collection of different measurement bases with no coherent overarching conceptual framework. Past attempts to set out fundamental measurement concepts have not been successful. In particular, the FASB’s prodigious efforts in the late 1970s and early 1980s could not achieve agreement on a conceptual measurement framework.
6. One phase of the joint IASB/FASB conceptual framework project is addressing initial and subsequent measurement of elements in financial statements. What are the prospects for success this time around? On the positive side, there have been notable developments that are recognized to have significant applications to financial reporting measurement – developments emanating in particular from probability theory, present value methodologies, capital market pricing theories and practices, computer and information technology, and risk management and hedging strategies. But, to date, these developments have not resulted in any breakthroughs toward establishing a comprehensive measurement theory for financial reporting.
7. What is standing in the way? Some may believe that financial reporting measurement is in transition between traditional accounting thinking (based on historical cost-based matching objectives) and measurements reflecting market-based principles that attempt to encompass the areas of development noted above. On the one hand, traditional concepts and conventions are generally recognized to have serious deficiencies. Nevertheless, they continue to provide the basis for much financial reporting; many believe that they have superior decision usefulness in accounting for at least business operating assets and liabilities.
8. On the other hand, current market-based measurements, encompassing accepted capital market pricing theories and practices, have some appealing conceptual qualities. They are generally perceived to provide greater decision usefulness than historical cost-based methods for many financial assets and liabilities. But the overall role of current market-based measurements in financial reporting has yet to be articulated. Troublesome questions concerning the relevance and measurability of current market value or “fair value” measurements in respect of significant classes of assets and liabilities (especially in some economic circumstances) have precluded current market value or “fair value” from being accepted as the appropriate basis for a comprehensive financial reporting measurement framework.

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2 This goal was set out in paragraph P4 of the IASB Exposure Draft, *An Improved Conceptual Framework for Reporting*, (IASB, 2008a).

9. In summary, the discussion is most heated over whether or when assets and liabilities should be measured for financial reporting purposes at current market-based prices, on other current cost or current value bases or on the basis of past, historical cost-based, transaction prices.
10. Some may believe that it is unnecessary to bother searching for an overarching measurement theory for financial reporting — that it is sufficient to accept mixed measurements with, perhaps, an improved taxonomy for selecting which measurement basis to use in which situations. But, surely, a rational taxonomy requires a sound economic theory as its basis. This paper is founded in the belief that a conceptual measurement framework for financial reporting should be deduced as far as possible by reasoning rigorously from accepted financial reporting objectives, the economic purposes and wealth-generating processes of profit-oriented entities, and the effects of market forces.
11. It is proposed that the objective should be to bring to bear existing theoretical and empirical knowledge in economics and other fields that is relevant to measurement for financial reporting purposes. It is further proposed that a comprehensive conceptual measurement framework should explicitly recognize limitations in measurability and what causes them, and address the implications of these limitations for financial reporting.

## **II. PREMISES**

12. This paper proposes that the following premises provide the foundation on which a coherent measurement framework should rest.

### **Basic premises**

#### **1. The economic purpose of profit-oriented entities**

13. The economic purpose of a profit-oriented entity is to add value (create wealth) which is expressed in units of money and ultimately conceived as command over cash, or claims to expected future cash or cash-equivalent flows. Thus, a profit-oriented (business) entity invests in assets, regardless of their form, for the future net cash-equivalent flows that they are expected to generate.

## 2. The objective of financial reporting

14. The IASB *Conceptual Framework for Financial Reporting – Chapter 1: The Objective of General Purpose Financial Reporting*, issued jointly with the FASB in September 2010 (IASB, 2010b), sets out the following conclusions:
- “The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity.” (para. OB2)
  - These users need information to help them assess the prospects for future net cash inflows to the reporting entity. They are therefore interested in information about the amounts, timing and uncertainty of its future cash flows. (para. OB3)
  - “To assess an entity’s prospects for future net cash inflows,” these users need information about “the resources of the entity, claims against the entity, and how efficiently and effectively the entity’s management and governing board have discharged their responsibilities to use the entity’s resources.” (para. OB4)
15. The *Conceptual Framework* (CFW) thus sees two general uses of financial information about business entities: (1) assessing prospects for future cash flows, and (2) assessing the quality of management’s stewardship. This paper considers stewardship to embrace a broad concept of accountability for an entity’s resources, including their efficient and profitable use in generating net cash inflows. Since positive cash flow generation is a primary economic objective of business activities, it may be concluded that information about the cash-flow expectations (amounts, timing, and uncertainty) attributes of assets and liabilities, and changes in them, should be considered a primary focus of financial reporting for business entities.

## 3. Profit-oriented entity cash-generating processes

16. The economic resources (assets), claims on those resources (liabilities and equity), and changes in them (income and cash flows) are the basic subject matter of financial reporting for profit-oriented entities. Profit-oriented entities typically create wealth by adding value to their assets through processes that use, combine, and transform acquired goods and services (inputs) to create other goods or services (outputs) which are sold to realize cash inflows. Most businesses have one or more processes for adding value, that is, for turning inputs into outputs with the objective that the value achieved from the sale of the outputs

will exceed the value sacrificed for the related inputs. These are the business operating activities of a profit-oriented entity.

17. In addition to these business operating activities, most profit-oriented entities engage in investing and financing activities. Some entities consist only for the purpose of investing assets, for example, mutual funds. Investing and financing assets and liabilities are differentiated from business operating assets and liabilities, because they do not involve cash-generating input-to-output processes in which they are combined and transformed. Investing assets and liabilities comprise those that are not used in business operating activities, but rather generate returns, or incur costs, in the nature of interest, dividends, or changes in market value. Financing assets and liabilities comprise the non-equity sources of financing for an entity's business operating and investing activities.<sup>3</sup>

#### **4. The role of markets and market prices**

18. Markets have a central role in the achievement of the economic purposes of business entities. Profit-oriented (business) entities operating in free enterprise market-based economies acquire assets and incur liabilities at values that are largely determined by competitive market forces. The economic success or failure of a business entity is determined by its ability to employ these assets and liabilities in its operating, investing, and financing activities to achieve economic benefits that are ultimately realized in the market place. It seems likely, then, that market prices should have a significant role in the measurement of assets and liabilities for financial reporting purposes.

### **Strategic accounting premises**

#### **5. Accrual accounting objective**

19. The CFW emphasizes the importance of accrual accounting:

“Accrual accounting depicts the effects of transactions and other events and circumstances on a reporting entity's economic resources and claims in the periods in which those effects occur, even if the resulting cash receipts and payments occur in a different period.” (IASB, 2010b: para. OB17)

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<sup>3</sup> These three classes of operating, investing, and financing assets and liabilities are consistent with the three sets of business entity activities defined in the IASB Discussion Paper, *Preliminary Views on Financial Statement Presentation* (IASB, 2008b).

20. This paragraph goes on to indicate that the importance of accrual accounting follows from the objective of financial reporting, because accrual accounting enables "... a better basis for assessing the entity's past and future performance than information solely about cash receipts and payments..."
21. The ultimate purpose of accrual accounting is to recognize the effects of events and changes in circumstances on the value of an entity's assets and liabilities when they occur, and to reflect the effects of cash-generating processes as they create value by transforming inputs into outputs. However, accountants' ability to measure the effects of value-changing activities and other events when they occur is significantly constrained by technical feasibility and cost. Some of these limitations may lessen over time if, for example, further developments in computer and information technology take place, and if markets and market pricing methodologies continue to evolve.

## **6. Concepts of assets and liabilities, and matching**

22. Some years ago the IASB and FASB conceptual frameworks adopted the "asset-liability view" in place of the traditional "revenue-expense matching view".<sup>4</sup> Under the "asset-liability view", items must meet economic definitions of "assets", "liabilities" or "equity instruments" to merit recognition on the balance sheets of business entities. Assets and liabilities are the basic building blocks that provide the focus for accounting measurement. Assets and liabilities are defined in terms of present resources or obligations from which future economic benefits or sacrifices (ultimately cash) are expected to flow to or from the entity.
23. Concerns about the "asset-liability view" in comparison with the "revenue-expense matching view" continue to be expressed, however. This paper reasons that these two views are not opposing concepts when viewed within a sound asset and liability measurement model. The revenue-expense matching view recognizes that economic sacrifices must be made (i.e., costs must be incurred) to achieve economic benefits (revenues). The asset-liability view assumed in this paper does not dispute this, but is based on the premise that, to obtain a valid matching, revenues and expenses must represent the results of sound measurements of increases and decreases in the economic values of operating assets and liabilities (i.e., matching is the outcome of properly identifying and measuring assets and liabilities, not an objective on its own). Since the balance sheet and income statement articulate with each other, the reported change in net assets (assets less liabilities) during a period equals the reported net income for that period, after adjustment for capital contributions and withdrawals.

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4 See FASB, 1980: in particular, paras. 11, 14 and 15; and IASB, 2010b: paras. OB12-OB16 and BC1.31-33.

24. The asset-liability view does not lessen the importance of the income statement. The balance sheet and income statement complement each other and each is necessary to meet the needs of users. A reported income return is interpreted in relation to the net asset base that generated it.

### III. DEFINING CURRENT MARKET VALUE

25. The principles proposed in this paper assign a critical role to current market prices when they are practicable of faithful representation. As the starting point for developing this role, it is essential to clearly define “current market value” and the properties it embodies that comprise the basis of its claim to relevance in relation to other measurement bases. The principles proposed in this paper are premised on the following proposed definition of current market value:

The current market value of an asset or liability is its present exchange price determined, on the basis of publicly available information, by the competitive interaction of willing arm’s-length buyers and sellers in an open, active, and orderly market.

26. Current market value, so defined, may be evident from observable prices in open, active and orderly markets, or may be practicable of faithful representation using accepted models that incorporate the assumptions and observable inputs built into market prices.
27. The paper proposes that reasonable market efficiency is the essence of current market value. More specifically, this paper proposes that current market value, as defined above, derives its fundamental measurement properties from an expectation of reasonable market efficiency in its semi-strong form. The basis for the proposed definition, and its relationship to market efficiency, is founded on the author’s understanding of accepted economic theories and empirical evidence of how market forces work to determine market prices (see section B of the Appendix to this paper).
28. It is proposed that the current market value, as defined above, of an asset or liability embodies the following properties (The bases of these properties are examined in section B of the Appendix.):
- a) An estimate of future economic benefits or sacrifices (ultimately cash flows) to result from events or circumstances that have taken place.
  - b) An expectation of possible variations in the amounts and/or timing of future economic benefits or sacrifices (reflecting expected value probabilities that take into account all perceived possible outcomes).
  - c) The time value of money, representing the “risk-free” rate of interest.

- d) A price for bearing the uncertainties of the economic benefits or sacrifices inherent in the asset or liability.
  - e) The incorporation, based on publicly available information, of conditions current at the time of measurement with respect to properties (a)-(d) above.
  - f) A price that reflects the relative economic efficiency and effectiveness of competing alternatives to the asset or liability as a consequence of incorporating publicly available information.
  - g) A price that is independent of the private expectations and intentions of individual entities.
29. To be applicable to a reporting entity, the current market value of an asset or liability must be accessible to it. This follows from the open and active qualities of current market value. Market accessibility means that a reporting entity can access the current market value of an asset or liability to enable the fulfilment of its business processes in respect of that asset or liability.
30. The above proposed definition of current market value is generic in the sense that it does not address the entry or exit value implications of the market price of an asset or liability for the entity that owns the asset or owes the liability. A market price is neither an entry nor an exit value, but is simply the price at which an asset or liability can be exchanged. The entry or exit value implications of a market price of an asset or liability arise when one introduces the perspective of the entity that owns the asset or owes the liability. The entry and exit value implications of market prices from the reporting entity perspective are addressed in the principles proposed in section IV of this paper.
31. The IASB has recently issued a standard on fair value measurement (IFRS 13) (IASB, 2011a) that is very similar to FASB Statement No. 157 (FASB, 2006) and its supporting interpretations. The definition of fair value set out in these standards differs in some fundamental respects from the above-proposed definition of current market value, and the provisions of these standards differ in some significant respects from the principles proposed in this paper. Section H of the Appendix to this paper compares the above concept of current market value and the principles proposed in this paper for its measurement, with IFRS 13.

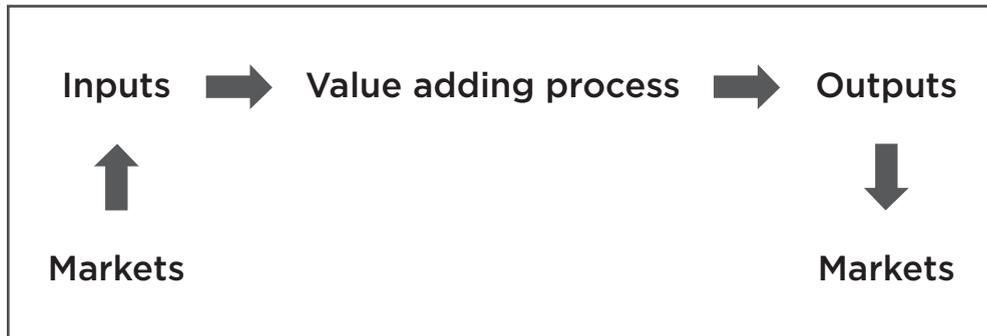
#### **IV. A PROPOSED MEASUREMENT FRAMEWORK**

32. The proposed principles differentiate between business operating, investing, and financing assets and liabilities. First, business operating assets are addressed, followed by business operating liabilities and investing and financing assets and liabilities. An impairment prin-

ciple is then proposed. Finally, supporting disclosures and capital maintenance implications are considered.

## Business operating assets

33. Business operating activities are conceptualized as market-input-to-market-output processes – as exhibited in the following chart:



34. Profit-oriented entities employ many different processes in attempting to add market value to their assets. Some entities create additional market value by transforming inputs such as raw materials, labour, plant and equipment, and certain intangibles (which could include patent rights and technical expertise), into goods and/or services which are sold. Most of these inputs lose their separate identities as they are used to create goods or services. Other entities add market value by acquiring assets in one market (a wholesale market) and establishing premises, sales staff, and services to enable the repackaging and sale of these assets at a profit in another market (a retail market). These assets may not undergo physical change during the retail process, but market value is added as a result of this process. Other business entities may add market value by aggregating assets, or by disaggregating assets into their component parts and selling the components (for example, a scrap dealer that strips wrecked cars for their parts).
35. Two principles are proposed in this section on operating assets. The first proposes a general principle for the recognition and measurement of economic value created by cash-generating processes (revenue). The second proposes a general principle for the measurement of input assets. Under proposed Principle 1, revenue recognition would require the achievement of market values that are practicable of faithful representation for the outputs that have been generated by the cash-generating processes. The assets achieved under proposed Principle 1 would become either input assets or investment assets of the business entity. Proposed Principle 2 would measure input assets at their current prices in the markets in which they originated or, when such market values are not practicable of faithful rep-

resentation, on the basis of the most relevant substitutes that are practicable of faithful representation. Several commonly advocated measurement bases are identified and their attributes compared with those of current market value.

## **Recognition of market value created by a cash-generating process (Principle 1)**

36. Among the most fundamental and difficult issues of financial reporting are those that involve determining at what points in differing cash-generating processes recognition should be given to the market value (revenue) created by those processes. The following principle is proposed.
37. **Principle 1: Market value created by a cash-generating process (revenue<sup>5</sup>) should be recognized when the process (1) has achieved an output that has a current market value that is practicable of faithful representation, and (2) has generated the good and/or service that is the source of that output market value.**
38. Market value created by a cash-generating process is ultimately determined by the cash received in the markets for the goods or services that have been generated by that process, cash being the most basic market traded commodity and exchange medium. The accrual accounting objective is to depict the results of this process as nearly as is practicable to the moment when the market value-creating activity has taken place, rather than to wait until cash is received. Principle 1 proposes that the accrual accounting objective can be achieved by meeting two conditions.
  - 1) An entity's cash-generating process has achieved an output with a current market value that is practicable of faithful representation. The market value of an output represents the cash-equivalent amount that is realizable by the entity. The moment at which an output of an entity's process achieves a market value that is practicable of faithful representation is, therefore, a critical event in the recognition of the creation of economic value.

Three matters need to be addressed to define this critical event. First, the meaning of “practicable of faithful representation” needs to be made clear and justified against the related qualitative characteristics set out in the IASB Conceptual Framework. Second, the definition of current market value, proposed in Part III, needs to be put in context with proposed Principle 1. Finally, consideration is given to the forms that assets may

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5 This paper views the market value created by an entity's cash-generating processes to equate to “revenue”, which is presently defined as “the gross inflow of economic benefits during a period in the course of the ordinary activities of an entity ...” (IASB, 2005a: para. 7).

take that have achieved the output market value condition, and to the ongoing measurement of these assets. Each of these matters is addressed below.

- 2) The process must have generated the good and/or service that is the source of the achieved output market value. The achievement of output market value is a necessary, but not a sufficient, condition for the recognition of revenue, since an entity may achieve the output market value before it has generated the underlying good and/or service. In this case, appropriate provision must be made for the entity's liability to produce the good and/or service, so that no income is recognized to have been generated by a cash-generating process until the two conditions are met. (The measurement of performance liabilities with customers is addressed in proposed Principle 3 in the later section of this paper that deals with business operating liabilities.)

### **Practicability of faithful representation**

39. The term “practicable of faithful representation” is intended in this paper to mean (a) capable of faithful representation, and (b) practical of cost-effective application.
40. Re (a) — The measurement principles proposed in this paper require a conceptually sound and robust basis for distinguishing faithful from unfaithful representations of measurement bases. This paper proposes that, to be a faithful representation, the application of a measurement basis to an asset or liability should result in a number that can be demonstrated to reasonably represent the essential properties of that measurement basis within a range of materiality that is relevant to users of the entity's financial report. This, in turn, requires reasonable substantiating evidence so that users of financial information can have confidence that depicted measurements of assets and liabilities are faithful representations of what they purport to depict. It is suggested that the concept of “verifiability” as defined in the IASB *Conceptual Framework* provides an appropriate standard of substantiating evidence. In other words, measurements for financial reporting purposes should be capable of reasonable substantiation of their faithful representation on the basis that “different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation” (IASB, 2010b: para. QC26).
41. Unfortunately, this interpretation of “faithful representation” seems to be inconsistent with the IASB *Conceptual Framework* qualitative characteristic for faithful representation – see discussion of this issue at Appendix, section A.

42. Re (b) — The cost-effectiveness condition is intended to be consistent with the cost constraint on useful financial information set out in the IASB Conceptual Framework (IASB, 2010b: paras. QC35-QC39).

### **The definition of market value**

43. Reasoning from the accrual accounting objective, it may be concluded that economic value created by a cash-generating process should be recognized as nearly as is practicable to the moment when that economic value is created. This, it is proposed, is the earliest moment at which the cash amount that is realizable for an output is practicable of faithful representation. Principle 1 proposes that this is the moment when an output generated by a cash-generating process has a current market value that is practicable of faithful representation.
44. It is proposed that current market value, as defined in Part III, has the necessary properties to provide the basis for recognizing economic value created by an entity's cash-generating process. It represents the cash-equivalent amount that is realizable by the entity. By way of comparison, section H of the Appendix explains that "fair value", as defined and applied in existing standards, is too broad a concept to serve the purposes of proposed Principle 1.
45. Proposed Principle 1 would not allow substitutes or alternatives for current market value, as defined, because it is proposed that no substitute or alternative could be relied upon to faithfully represent the output asset value that could be realized in the market for that asset. Thus, Principle 1 would require output market value, as defined by current market value, to be practicable of faithful representation as a condition for the recognition of revenue.

### **Assets that may meet the output market value condition**

46. The earliest point at which an output's market value is practicable of faithful representation will depend on the nature of an entity's cash-generating process and the markets for its outputs. This may be the point at which a sale takes place, if the activity necessary to achieve the sale of a good or service is an essential, inseparable component of the cash-generating process.<sup>6</sup> In such a case, the asset meeting the output market value condition may be cash or a receivable from the customer. (Under normal conditions, the market values of receivables from customers seem likely to be practicable of faithful representation using a present value model incorporating reasonably attainable information about the probable timing and amounts of future cash flows and current market risk-adjusted interest rates.)

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<sup>6</sup> The sales activity could be expected to include delivery of a good, where delivery is an essential, inseparable component of a cash-generating process.

47. In some processes output market values may be practicable of faithful representation at earlier stages than completion of a sale. Some goods may have practicably determinable market values when they are produced (for example, possibly a mining entity that produces gold or some other commodity for which there is a ready market price that does not have an inseparable sale or delivery process component). In some other situations, the output market value condition may be met as goods are processed (examples could include some work in process under long-term construction contracts). The earliest moments at which output market values are practicable of faithful representation may change over time as markets and abilities to faithfully represent market values on cost-effective bases continue to evolve.
48. This paper does not attempt to address the many and varied issues of revenue recognition. Revenue recognition standards must take into account extensive differences in cash-generating processes and cost constraints. Proposed Principle 1 should, however, provide a conceptual starting point for addressing revenue recognition issues. Section G of the accompanying Appendix briefly discusses some considerations related to the relevance of proposed Principle 1 to the development of revenue recognition standards, and a comparison with the revised Exposure Draft on revenue recognition that was jointly proposed by the IASB and FASB (IASB, 2011b).

#### **Ongoing measurement of assets that meet the output market value condition for revenue recognition**

49. At the moment when an asset is recognized to meet the output market value condition proposed in Principle 1, its market value represents the amount of revenue or deferred revenue obligation generated by the entity's cash-generating process. This output asset is a new asset that originates in the market with customers for the good or service. If this asset is other than cash, it will immediately become either an input asset or an investment asset to be measured in subsequent periods on the basis of the proposed principles for these assets. For example, a receivable from a customer may be considered to be an input to the customer-financing process of the reporting entity. As such, it would be subject to proposed Principle 2. Alternatively, if a loan to a customer is considered to be an investment, it would be subject to proposed Principle 5. It will be seen that this paper proposes that input and investment assets be measured on the same basis (i.e., at current prices in the markets in which the assets originated, or when such prices are not practicable of faithful representation, on the basis of the most relevant substitutes that are practicable of faithful representation).

## The measurement of input assets (Principle 2)

50. Reasoning from proposed Principle 1, the measurement of input assets should not anticipate value that is yet to be achieved by a business entity's cash-generating process. The following principle is proposed.
51. **Principle 2: Assets that are inputs to a cash-generating process should be measured at current prices in the markets in which the inputs would be acquired by the entity or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values or in substitute measurement bases that reflect current input values would be reported immediately in the statement of income.**
52. Principle 2 reflects four proposals:
- 1) The most relevant measurement basis for inputs that comprise input assets is current market value (as defined in Part III).
  - 2) The appropriate markets for input assets are those in which the assets would be acquired by the entity. Under both proposed Principles 1 and 2, the current market value of an asset as defined in Part III reflects the market's valuation of that asset's cash-flow generating expectations. From the perspective of the acquirer of an asset to be used as an input to its cash-generating processes, the asset's market price is not its exit value, since the input asset's "exit" will be through its contribution to creating the outputs that will result from these processes.<sup>7</sup> Nevertheless, the current price of that asset in the market in which it would be acquired by the entity in its current state (i.e., as it is, where it is) is that market's measure of its future cash-generating ability. This market value reflects no value added by the entity's cash-generating process, but rather reflects the market value of the asset as an input to the acquiring entity's cash-generating process. This market value is, the paper proposes, the most relevant measure of the asset's economic value to the entity, pending its transformation into outputs meeting the conditions proposed in Principle 1. This market value is consistent with the accepted definition of "assets", because it reflects the market's valuation of future economic benefits.

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7 It is possible that an input asset will be sold rather than used in a cash-generating process, and that it may be sold in a different market from the market(s) in which it was acquired by the entity. This possibility is addressed later in this paper in the discussion of proposed Principle 5 on investing and financing assets and liabilities.

- 3) Other measurement bases would be looked to when current market value is judged not to be practicable of faithful representation. Thus, the judgment of the practicability of faithful representation would have a crucial role.
- 4) Changes in current market values, or in substitute measurement bases that reflect current input values, would be reflected immediately in income. When current market values are practicable of faithful representation, Principles 1 and 2 would result in revenues (value created) and expenses (value sacrificed) being measured at their market prices at the times revenues were achieved. Income reported for a cash-generating process in a period would then match the current market value of recognized outputs with the current market value of the inputs sacrificed in attaining those outputs. The accrual accounting objective would be optimized, because revenues and expenses would reflect the results (as measured by current market prices) of cash-generating activities and other price-affecting events and circumstances when they took place. Thus, when current market values of the inputs are practicable of faithful representation, there would be no mismatching resulting from measuring revenues and expenses at prices received and incurred at different times.

Changes over time in the market values of input assets would represent the market's evaluation of two possible effects:

- a) Changes in the market's evaluation of an input asset's ability to contribute to a cash-generating process. Most tangible assets being used in cash-generating processes, including plant and equipment, decline in value through use and over time as a result of declining productivity and useful lives caused by physical deterioration and technological obsolescence.
- b) The effects of changes in the price(s) the market puts on an input asset's expected remaining future cash-generating capacity. Such price change effects represent holding gains or losses.

Ideally it would be useful to distinguish these two effects in the statement of income because they could have different implications for assessing the future cash-generating ability (sustainable earnings) of a business entity. The market value changes of input assets, such as non-perishable commodities and land that do not deteriorate with time or use, would be fully attributable to price change effects (that is, to b) above).

53. Many dispute the relevance of continuously remeasuring input assets at their current prices in the markets in which they would be acquired (or the use of a current cost substitute), with holding gains and losses reflected immediately in income. Their arguments need to be

rigorously examined. The basic arguments that have been made in opposition to reflecting input asset price change effects are examined at section D of the Appendix.

54. The balance of this section, supported by referenced sections of the Appendix,
- addresses several significant implications of proposed Principle 2 (implications for private entity expectations, self-constructed input assets, and goodwill);
  - compares the proposed relevance of current market value as it would be applied in proposed Principle 2 with the properties of other measurement bases; and
  - discusses the practicable faithful representation condition.

### **Some implications of proposed Principle 2**

55. Comparison with entity expectations. The entity acquiring an input asset will commonly expect it to achieve economic value in excess of its acquisition market price through the cash-generating process in which it will be used or transformed. But, under proposed Principle 1, an entity's private expectations for adding value would not be recognized in financial statements until the activities necessary to achieve this value have taken place and the value created is validated by market prices for the resulting outputs. This is not intended to deny that there can be decision usefulness in information about management's expectations. However, reasoning from Principle 1, such information would be appropriately provided as supplementary disclosures or as separate management forecasts. A more in-depth discussion of arguments for and against basing measurements for financial reporting purposes on market values versus private entity-determined values is contained in section C of the Appendix.
56. Self-constructed input assets. Self-constructed input assets would include a plant building that is constructed by an entity for its own use; equipment that is adapted or modified for use within an entity's cash-generating process; and an intangible input asset, such as a patent right, that has been developed internally as a result of an entity's own research and development activities. Inventories of work in process and manufactured finished goods would be considered to be self-constructed input assets when they are judged not to meet proposed Principle 1.
57. Principle 2 proposes that, where practicable, assets that are inputs to a cash-generating process should be measured at current prices in the markets in which the inputs would be acquired by the entity. A self-constructed input asset will be the result of multiple inputs, which could include raw materials, purchased equipment, labour, and various overheads.

To adhere to Principles 1 and 2, there must be no recognition of any value added as a result of combining inputs to construct an input asset. Consequently, from the perspective of the reporting entity, the current market value of a self-constructed input asset is the sum of the current market values on the measurement date of the individual inputs that comprise it. In other words, a self-constructed input asset would be expected to be acquired by acquiring its separate, individual inputs in the markets for these inputs. This summation of the market values of apportioned inputs will usually differ from the price that an identical fully constructed asset could be expected to command in the market in which it could be acquired on that date. It may be expected to differ by at least the profit margin that the market would demand for constructing the asset.

58. The sum of the current market values of the inputs that comprise a self-constructed input asset may rarely be practicable of faithful representation. Thus, it may typically be necessary to select the most relevant substitute that is practicable of faithful representation. (Under existing generally accepted accounting principles, recognized self-constructed input assets are usually “measured” by summing the allocated historical costs of inputs that are considered to be attributable to them.)
59. Goodwill. Goodwill is recognized as an asset only when it is acquired as a result of the acquisition of a business entity. Under existing standards, goodwill is the amount paid by a reporting entity for another business entity in excess of the estimated fair value of the acquired entity’s individually identified assets less liabilities. Goodwill is a unique type of asset because it represents expected future economic benefits to be generated by the future cash-generating activities of the acquired entity over and above those represented by the values ascribed to the acquired entity’s identifiable net assets at the date of acquisition. As such, goodwill may be considered to represent the expected ability of the acquired entity to earn a higher rate of return on its collection of identified assets less liabilities than would be expected from those assets net of liabilities operating separately (the “synergy effect”).
60. The amount attributed to purchased goodwill is recognized on the balance sheet as an asset. It would not, however, qualify under proposed Principle 2 for re-measurement (except, as proposed under Principle 6, when the applicable cash-generating unit is impaired), because such re-measurement would be anticipating the results of future cash-generating activities that are not embodied in its acquisition price.
61. Separately identifiable intangible assets, such as research and development and patent rights, would qualify as input assets under proposed Principle 2, because their current prices in the markets in which they would be acquired would be independent of the expected results of the future cash-generating processes of the reporting entity. These intangibles may often be self-constructed input assets. However, some intangibles would be

more analogous to goodwill than input assets, if their current market values represent the capitalization of the expected results of the future cash-generating processes of the reporting entity.

### **The relevance of current market value in comparison with other measurement bases**

62. Proposed Principle 2 is based on the proposition that current market value, measured by current prices in the markets in which input assets would be acquired by the reporting entity, is the most relevant measure of input assets for financial reporting purposes. Many will undoubtedly have difficulty accepting this proposition. Various other measurement bases have been claimed to have superior relevance for operating input assets, although there is much disagreement among the advocates of these other bases. Some support a mixed measurement model, arguing that some measurement bases are more relevant for different operating assets or in differing situations than others.
63. It is important to rigorously address the bases for these claims. This paper cannot hope to present sufficiently definitive material to satisfy all those who advocate other measurement bases. But, this paper does propose an approach for addressing these claims; it proposes that the attributes claimed for other measurement bases be rigorously evaluated against the properties of current market value.
64. The issue, then, is whether other measurement bases have properties that are of equal or greater relevance to those of current market value. The following is a preliminary attempt to highlight the principal properties of prominent measurement bases that have been advocated for financial reporting purposes. Some additional comments on each of these bases are contained in the noted sections of the Appendix. These preliminary analyses and comments are not definitive. Rather, the analyses, comments, and concept of current market value, presented in this paper are offered as a challenge to those who advocate particular measurement bases to present their cases.
65. Historical cost/historical market value. Historical cost has long been the predominant basis of accounting for input assets. It appears to be widely accepted as the most relevant measurement basis that is practicable of faithful representation for input assets. The one exception is that support for historical cost accounting seems to fall away during periods of significant inflation, but many believe that its relevance can be restored in these times through general price level adjustments. In short, many seem to be willing to forgive historical cost accounting its limitations, and reason that its relevance has been established by its staying power over many years. But, at the same time, it is well recognized that historical cost-based accounting for input assets has some significant shortcomings. Various current-

value and current-cost and replacement-cost alternatives have been advocated, and IASB standards permit the measurement of property, plant and equipment at fair value when it can be reliably measured (see IASB, 2004a: para. 31).

66. Traditional historical cost-based accounting for input assets has a different measurement objective from that of current market value as proposed in Principle 2. Under historical cost accounting, the purpose is to represent the costs incurred to acquire an asset. The aggregate cost to acquire an asset will include its transaction price plus transaction costs, and perhaps other costs that might be attributed to the asset that would not be embodied in its market price on initial acquisition. The historical cost of an asset will therefore differ from the market's valuation of an asset's expected future economic benefits on initial acquisition. As a result, looking to the properties of the proposed concept of current market value outlined in Part III, historical cost of an input asset could purport to meet property (a) (i.e., reflect estimated future economic benefits) at the time of initial recognition on the basis that it reflects the private expectations of the reporting entity, in which case it would fail (g) (independence from private expectations and intentions). The historical cost of an input asset fails to meet proposed Principle 1, because the difference between an input asset's historical cost and its market value on acquisition is effectively attributing positive or negative value to the asset that is yet to be achieved by the entity's cash-generating process and validated by output market prices. (This difference in purpose is common to all cost-based measurements, including current replacement cost and current reproduction cost.)
67. This shortcoming on initial recognition would be removed by redefining the "historical cost" objective to "historical market value". The objective then would be to measure input assets on their initial acquisition at the current market prices of their inputs in the markets in which they would be acquired.
68. Subsequent to initial recognition, the historical market value basis differs from current market value in not reflecting price change effects (except under a lower of cost and market modification of the historical market value). Consequently, it does not meet property (e) of the proposed current market value ideal (i.e., it would not reflect conditions that are current at the time of measurement). This paper reasons from this that historical market-value-based accounting for input assets provides a more limited, less relevant, representation than the current-market value ideal. As noted earlier, the re-measurement of input assets to reflect price change effects is strongly opposed by the many advocates of historical cost-based accounting, and it is essential that their arguments be rigorously examined. Section D of the Appendix examines what appear to be the basic arguments that have been put forward.

69. Under proposed Principle 2, the role of historical market value-based accounting for input assets is as a possible substitute when current market value is not practicable of faithful representation. Its merits as a substitute would be judged in comparison with the evaluated relevance and practicability of faithful representation of other measurement bases, including current cost-based measurements.
70. Despite its limitations, the historical market value basis, reasonably applied, can purport to possess some significant properties of the current market value ideal and therefore to have a claim to relevance as a decision useful substitute when current market value is not practicable of faithful representation. That it has significant relevance is demonstrated by its long-established acceptance supported by empirical evidence of its information value. An analysis of the potential properties of historical market value-based accounting for depreciable input assets is provided at section J of the Appendix to this paper.
71. Fair value. Fair value as defined and applied in IFRS 13 (IASB, 2011a) embraces a broader current value concept than this paper's proposed concept of current market value. In particular, fair value could be represented by other measurement bases, including current replacement cost and value in use, in some situations. Further, the definition of fair value as an exit price is inconsistent with the principles proposed in this paper. For further analysis, see section H of the Appendix.
72. Current replacement cost. The current replacement cost objective is to measure the most economic current cost required to replace an asset's existing operating capacity. Market value does not focus on the physical operating capacity of an asset, but has the broader objective of measuring an asset's current expected cash-generating ability. This is consistent with the economic purpose of profit-oriented entities (to invest in assets for the future net cash or equivalent flows that they are expected to generate — see Basic Premise 1, paragraph 13, and Appendix section M). The current market price of an asset therefore envisages operating capacity in terms of the asset's cash-generating ability.
73. The market's measure of an input asset's cash-generating capacity does not envisage an entity's particular operating process. Rather, the current market value of an input reflects the price at which that input can currently be acquired. Under reasonably efficient market conditions this price embodies publicly available information about any other more economic alternatives to the existing input (current market value property (f) at paragraph 28). In other words, if an asset is perceived in the market place to have less economic capacity to generate future cash flows than some other available alternative, its market price will be discounted in relation to that of the alternative. For example, if an entity owns a computer that is technologically less economic than a competing model, the market can be expected to know this, assuming the information is publicly available, so that the current

market price of the entity's computer can be expected to be discounted for the effect of the technological difference. It may be reasoned, then, that the current price of an input in the market in which it would be acquired represents the most economic current price of its expected cash-generating ability.

74. An estimate of the current replacement cost of an asset that exceeds, or is less than, its current market price must anticipate the recovery of the excess over the market price (for example, transaction costs), or a future loss of the amount by which it is less than the current market price. Such differences from current market value would, in effect, be anticipating a value or loss from future, yet-to-be achieved revenue-generating activities, and thus would not meet proposed Principle 1. It may be concluded, then, that the current prices of input assets in the markets in which they would be acquired are more relevant than their current replacement costs.
75. Therefore, an estimate of the current replacement price of an input asset would, under the principles proposed in this paper, be restricted to that of a possible substitute (with some adjustments) for current market value when current market value is not practicable of faithful representation. Current replacement cost (after deduction of transaction costs) might be the most relevant substitute for current market value for some input assets, subject to a relevant recoverable value test. There are, however, issues pertaining to the ability to define the operating capacity objective and determine the current replacement costs of common assets when their current market values are not determinable. Some believe that these issues evidence fundamental conceptual problems with the current replacement cost operating capacity measurement objective, particularly when the capacities of operating assets have been significantly affected by technological change. Others believe that these problems are over stated and can be reasonably addressed. Section K of the Appendix comments on these issues.
76. Current replacement cost advocates dispute the relevance of reporting in income holding gains and losses arising from changes in the market (replacement) prices of input assets. They argue that these price change effects should be treated as capital adjustments in order to maintain an entity's operating capacity. This paper accepts that a valid measurement framework must embody a clear and relevant capital maintenance concept in order to have a clear and relevant basis for distinguishing return *on* capital (income) from return *of* capital. A later section of Part IV, supplemented by Appendix section L, addresses the capital maintenance implications of the framework of principles proposed in this paper. It reasons that current market value, as defined and applied in this paper, embraces a concept of capital that has broader relevance for financial reporting purposes than capital defined on the basis of physical operating capacity.

77. Deprival value. Deprival value is defined as the lower of current replacement cost and current recoverable value, with recoverable value being the higher of net realizable value and value in use. Deprival value purports to measure the current value of an asset to a business entity.
78. The current market value of an asset, as defined by the principles proposed in this paper, embodies its deprival value (see Appendix section K). In short, deprival value would not seem to possess any relevant properties that are not impounded within current market value. Thus, the potential relevance of deprival value for input asset measurement purposes is as a possible substitute when the current prices in the markets in which input assets would be acquired are not practicable of faithful representation. Further comments on deprival value are set out in section K of the Appendix.
79. Current reproduction cost. Current reproduction cost purports to measure the current cost to reproduce existing assets, rather than the most economic current cost to replace their operating capacity. It may, therefore, seem to have a more limited, less relevant, measurement objective than current replacement cost. But advocates of current reproduction cost do not accept that it is less relevant. They argue that the objective of financial reporting measurement should be to measure the assets that the entity actually has, and the current operating income resulting from the employment of those assets. They contend that attempting to measure the most economic cost to replace the operating capacity of an asset with another asset that the entity does not own is a matter for future investment decisions and is not a relevant basis for reporting on past activities. For further discussion, see Appendix section K.
80. In summary, there are differences of opinion on the comparative relevance and practicable measurability of current replacement cost, deprival value, and current reproduction cost. But, they all lack certain of the relevant properties of current market value. Therefore, they are considered within the context of proposed Principle 2 in terms of their relative merits as possible substitutes for the current prices of input assets in the markets in which they would be acquired when these prices are not practicable of faithful representation.
81. Present value models. Present value (time value of money) is embodied within current market value (property (c) – see paragraph 28), and may be incorporated within other measurement bases. For example, as demonstrated in section J of the Appendix, depreciation of the historical market value of fixed assets can be applied on a time-value-of-money basis.
82. Present value principles may be applied to estimate the current market values of assets and liabilities for which future cash flows and current market risk-adjusted interest rates are practicable of faithful representation. FASB Statement of Financial Concepts State-

ment No. 7, *Using Cash Flow Information and Present Value in Accounting Measurements*, concludes that:

“The only objective of present value, when used in accounting measurements at initial recognition and fresh-start measurements, is to estimate fair value. Stated differently, present value should attempt to capture the elements that taken together would comprise a market price if one existed, that is, fair value.” (FASB, 2000: para. 25)

83. The objective of a present value estimate of an asset or liability should, then, be to come as close as is practicable to representing its current market value. When significant properties of current market value for a particular asset or liability are not practicable of faithful representation using a present value-based model, a present value estimate may, nevertheless, represent the most relevant substitute that is practicable of faithful representation for some assets and liabilities. See further discussion of the relationship of present value to market value in section B of the Appendix.

#### **The practicable faithful representation condition**

84. Current market prices will be practicable of faithful representation on a continuous basis for some input assets. Examples include commodities that are actively traded. The continuous current market value measurement of these assets would reflect the effects of investment decisions to, for example, stockpile commodity inventories in the expectation of future price increases, or to employ, or not employ, price hedging strategies using derivative financial instruments (which are measured at their current market values). Commodities for which current market values are practicable of faithful representation are the very assets that are open to price hedging strategies. From a stewardship perspective, the IASB Conceptual Framework notes that management’s responsibilities “... include protecting the entity’s resources from unfavourable effects of economic factors such as price and technological changes ...” (IASB, 2010b: para. OB4). Measuring such input assets at their current market values would enable direct accountability by management for their input asset price management activities.
85. Current market prices may also be practicable of faithful representation for some interchangeable items that are bought by retailers in wholesale markets and, perhaps, some standard assets being used in cash-generating processes, such as automobiles and trucks for which there are active new and used vehicle markets. There appear, however, to be serious discontinuities between new and used car and truck market prices, which might be due to information asymmetry. A preliminary discussion of information asymmetry and its possible implications for financial accounting measurement is provided at Appendix, section I.

86. Markets and information technology may be expected to continue to develop so that some input asset market values that are not practicable of faithful representation today may be so in the future.
87. When the current market value of an input asset is not capable of faithful, cost effective, estimation on an ongoing basis, Principle 2 proposes that one look for the next most relevant measurement basis that is practicable of faithful representation. This proposal accords with the IASB *Conceptual Framework for Financial Reporting 2010* (IASB, 2010b). The *Conceptual Framework* provides that, while financial information should be both relevant and faithfully represented, there should be no trade-offs between these two fundamental qualitative characteristics. Specifically, it provides, in paragraph QC18, that first, information that is most relevant should be identified, and then a determination should be made as to “whether that information is available and can be faithfully represented”. If that information cannot be faithfully represented, then “the process is repeated with the next most relevant type of information”.
88. The most relevant substitute would be the one that most nearly embodies the properties of current market value. It might be reasoned that, with some adjustments (for example, to exclude transaction costs), current replacement cost, deprival value, or current reproduction cost measurement bases are more relevant (because they reflect current prices) than historical cost or historical market value bases. However, the latter would continue to be the predominant accounting basis for input assets if these other current measurement bases are judged not to be practicable of faithful representation. Practicability considerations will require judgments of cost constraints (i.e., to determine whether the benefits of a particular measurement basis for a particular type of asset are likely to justify the costs incurred to provide and use it) (see *Ibid.*: paras. QC35-9).
89. This paper does not attempt to make these judgments. Accounting standard setters would have this responsibility. To the extent that accounting standards are not definitive, or permit choice, these judgments would have to be made by financial statement providers and their auditors.
90. It may be expected that familiarity with historical cost-based accounting will lead most accountants to presume that it is the most relevant basis that is practicable of faithful representation for input assets. However, there are some strong advocates for current replacement cost, deprival value and current cost bases. They point to the availability of current price indices for various types of assets and to the availability of independent expert valuers, suggesting that estimates of current input values are more practicable of faithful representation than may generally be recognized by financial accountants and accounting

standard setters. The proposals of Principle 2 and supporting discussions strongly imply that standard setters should be undertaking in-depth studies of these possibilities.

91. A substitute measurement is, by definition, less relevant than current market value. But, to be an acceptable measurement with a legitimate claim to decision usefulness, a substitute must possess sufficient relevant properties to give it a legitimate claim to information value for user decision purposes. In some situations, no relevant measurement may be practicable of faithful representation. In such situations there will be an insufficient basis for recognizing the input as an asset as in the case, for example, of some self-constructed intangibles representing research and development inputs.
92. Substitute measurements should be clearly distinguished from current market values, and their more limited properties made clearly evident, including their bases and key assumptions. (See subsequent discussion later in this section on supporting disclosures.)

### **Business operating liabilities (Principles 3 and 4)**

93. **Principle 3: Except as provided by Principle 4, business operating liabilities should be measured at current prices in the markets in which the liabilities were issued or incurred or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values, or in substitute measurements that reflect current values, would be immediately reported in the statement of income.**
94. Business operating liabilities include amounts owing for acquired inputs, provisions for expected future expenditures resulting from past cash flow generating activities (such as defined benefit pension obligations for services that have been provided by employees, statutory obligations for environmental restoration, and obligations incurred as a result of past activities that have resulted in lawsuits) and for unfulfilled performance obligations to customers. The markets in which these liabilities were issued or incurred would be the markets for promises to pay cash or to provide services to the counterparties<sup>8</sup> under the contractual or statutory provisions that reflect the particular terms and risks of the different liabilities.

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8 A statutory obligation, for example, for environmental restoration, is not a contractual obligation to particular counterparties. It does, however, have economically equivalent features in representing an obligation to society that is enforceable by law. Its current market value may be envisaged as the current price in the market for contracts to effect such restoration.

95. Proposed Principle 3 parallels proposed Principle 2 on measuring input assets, in that these liability prices would not reflect any value that is yet to be created by the entity's cash-generating processes. Proposed Principle 4, below, proposes conditions for measurement at lower current settlement values. Although the current market prices proposed in Principle 3 appear to be entry prices, they measure the amounts that an entity would be expected to pay at a measurement date to fulfill these obligations, except when the conditions of proposed Principle 4 are met.<sup>9</sup>
96. When the current market value of a business operating liability is not practicable of faithful representation on an ongoing basis, proposed Principle 3 parallels proposed Principle 2, in providing that one look for the next most relevant measurement that is practicable of faithful representation. As with operating input assets, the most relevant substitute would be the one that most nearly embodies the properties of current market value.
97. When current market prices are not observable, an estimate may be made of the current present value of the future cash flows, or equivalents, required to fulfill the obligation. Such an estimate would reflect the expected cash or equivalent outflows, the time value of money, and the risks that the actual outflows may differ from expectations. It would as nearly as practicable reflect the principles, assumptions, and information that would be expected to be embodied in the current market price. In some cases, a present value estimate of a liability may be judged to faithfully represent its current market price. In other cases, present value estimates may be more limited representations of current values that cannot be justified to faithfully represent current market value. These estimates should be described in terms of what they can purport to represent, with disclosure of their key assumptions and limitations. See separate discussion of supporting disclosures later in this section.

### **Some issues**

#### ***Non-performance (credit) risk***

98. Market prices for liabilities reflect the market's valuation of the risk that the obligations will not be fulfilled (non-performance risk).<sup>10</sup> Accordingly, the market value of a liability will decrease (increase) with increases (decreases) in this risk. Many are troubled by this result and find it counterintuitive. Their concerns have been the subject of ongoing studies

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9 Proposed Principles 3 and 4 are fundamentally consistent with the proposals in IASB Exposure Draft, *Measurement of Liabilities in IAS 37*, (IASB, 2010a: paras. 36A-36F).

10 Non-performance risk comprises the credit risk of the debtor in respect of liabilities requiring future cash outflows and the risk that obligations to provide goods or services will not be fulfilled (both after taking into account any security that has been provided).

and deliberations by standard setters.<sup>11</sup> Since it is clear that the market values of liabilities include non-performance risk, the current debate is focused largely on whether the market values of some or all liabilities should be adjusted to remove the effects of non-performance risk, or changes in non-performance risk, in some or all situations. It is the position of this paper that the weight of evidence is that the non-performance risk effects incorporated in current market values of liabilities represent a relevant economic phenomenon that, appropriately presented and disclosed, should have significant information value for users once they become familiar with their measurement and implications. However, it seems clear that understanding and acceptance of these effects would require a significant change in the approaches that users, preparers, and accountants typically take to interpreting financial reports. In addition, estimating the effects of non-performance risk gives rise to difficult measurability issues when there is a lack of observable market evidence. Section F of the Appendix considers the principal arguments and issues in the context of the principles proposed in this paper.

### ***Profit margins***

99. Another commonly raised issue relates to the inclusion of a profit margin in the measurement of liabilities to provide services that the entity expects to fulfil itself. For example, an entity may expect to save the profit margin that would be included in a market price of an obligation for environmental restoration by fulfilling it through its own efforts. It may then argue that the profit margin should be excluded from the measurement of this liability. This would not be acceptable under proposed Principle 3. A fundamental premise underlying this principle is that operating liability prices should not anticipate value that is yet to be achieved. Principle 3 thus proposes that an obligation to provide services should not anticipate the profit margin from an entity's expected future provision of services until such time as that profit has been achieved by carrying out those services. See further discussion of this issue at Appendix, section G, paragraph G5(e).

### ***Income statement implications***

100. Changes in the market value of an operating liability would include the effects of changes in its expected future outflows, changes in the current rates of interest for the time value of money, and changes in the prices for bearing the risks that future cash flows could differ from current expectations. Where practicable, these different sources of change effects should be distinguished when they could affect a user's assessment of the entity's management of the underlying risks or of the timing, amounts and uncertainties of future

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<sup>11</sup> See, in particular, FASB, 2000: paras.78-88; Financial Instruments Joint Working Group of Standard Setters, 2000: paras. 4.50-4.62; and IASB, 2009b.

outflows. In particular, there are strong reasons for presenting the effects of changes in non-performance risk separately from operating income (see discussion at Appendix, section F).

101. **Principle 4: Business operating liabilities should be measured at current prices in markets in which they could be settled prior to maturity when such prices are lower than would be determined under Principle 3, if these prices could be achieved without additional cost to the entity (other than transaction costs) and are practicable of faithful representation.**
102. In some situations, an entity may be able to settle an operating liability at a lower amount than would be determined under proposed Principle 3 by settling it in a market for such liabilities with third parties. For example, an entity might be able to settle its warranty performance liabilities to customers in a third-party market with insurers. Such insurers may be prepared to assume these liabilities for less than the current price of warranties in the market with customers because the insurers do not have to incur the costs of selling the warranties. The entity should not have to incur costs (other than transaction costs) to undertake future activities to achieve a third-party market price, because value that is yet to be achieved by future activities should not be anticipated. Thus, this proposed Principle 4 parallels proposed Principle 1.
103. An entity meeting the conditions specified in proposed Principle 4 would recognize that value has been created by its cash-generating activities. For example, if the conditions of proposed Principle 4 were met in the above warranty situation, the reduction in the market value of the liability would have been created by the entity's selling activities.
104. Principle 4 may have limited application because market prices for settlement with third parties may not be practicable of faithful representation for most operating liabilities and because the creditor counterparties may have to approve their transfer to third parties. Creditors would not be expected to approve such a transfer without receiving assurance that the credit rating of the third party is at least as good as that of the transferring entity, or obtaining additional security or a guarantee from the entity, or from a third party that is at least as creditworthy as the reporting entity.
105. In some situations, an entity might be able to achieve settlement of a liability at a price that is lower than would be determined under proposed Principle 3, by paying to cancel it. Reasoning from proposed Principle 4, the liability would be measured at a lower cancellation amount if the amount is practicable of faithful representation and if only transaction costs would be incurred to realize it. This would not be the case, for example, if future efforts would be required to negotiate the cancellation.

### Performance liabilities with customers

106. Proposed Principle 3 provides that, except where the conditions of Principle 4 are met, performance liabilities under contracts with customers should be measured at current contract transaction prices in the markets with customers when such prices are practicable of faithful representation. Such market prices would then reflect the effects of the time value of money and attendant risks and would be continuously updated to reflect changes in the current market prices of the contracts. This paper does not attempt to make any judgments as to whether or when current market prices of such liabilities may be practicable of faithful representation and, if not, what may be the most relevant substitute that would be practicable of faithful representation. Appendix, section G comments on some apparent differences between the measurement of performance liabilities with customers proposed in the IASB Revised Exposure Draft, *Revenue from Contracts with Customers* (IASB, 2011b) and proposed Principles 3 and 4.

### Investing and financing assets and liabilities (Principle 5)

107. Investing and financing assets and liabilities are distinguished from business operating assets and liabilities in the following basic respects:
- Investing and financing assets and liabilities are not part of a cash-generating process. Rather, each is a stand-alone asset or liability that has been acquired, issued or incurred with the expectation of generating returns or costs resulting from interest, dividends, or changes in market value. These returns or costs do not involve any cash-generating processes to add value to these assets and liabilities (but involve only decision making processes for holding, selling, or settling them).
  - There is no input-output distinction for investing and financing assets and liabilities, because these assets and liabilities will be realized or settled in markets equivalent to those in which they were acquired, issued or incurred. There may be different markets in different locations for identical financial assets and liabilities, but under reasonably efficient market conditions, price differences will be quickly arbitrated away.

108. The following principle is proposed:

**Principle 5: Investing and financing assets and liabilities should be measured at current prices in the markets in which they were acquired, issued or incurred or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current**

**market values, or in substitute measurements that reflect current values, should be immediately reported in the statement of income.**

109. The market in which an investing or financing asset or liability was acquired, issued or incurred is both its entry and exit market from the perspective of the reporting entity. Thus, Principle 5 can be framed in identical terms to proposed Principles 2 and 3 on input assets and operating liabilities since all three principles look to prices in their respective input markets. An entity should not be expected to achieve income by “trading up” to a different market from that in which it acquired, issued or incurred an investing or financing asset or liability, unless the asset or liability is really an operating asset or liability and the conditions proposed in Principles 1 or 4 are met for the recognition of operating income. Some financial assets and liabilities may be business operating assets and liabilities, as is discussed later in this section.
110. Consistent with proposed Principles 2 and 3, Principle 5 proposes that current market value, as defined, is the most relevant measurement for investing and financing assets and liabilities. However, many believe that amortized cost has superior relevance for some significant investing and financing assets and liabilities, and it is important that the arguments made in support of this belief be thoroughly examined. Arguments for and against the relevance of “fair value” in comparison with amortized historical cost for financial instruments have been the subject of extensive study. Discussion papers issued by the IASB, FASB, and some other standard setters have generally supported a comprehensive fair value measurement objective for financial instruments.<sup>12</sup> Many remain unconvinced, however, and the IASB IFRS 9 recently ruled that amortized historical cost accounting is appropriate for particular types of financial instruments in particular circumstances (IASB, 2009a: paras. 4.1.1 and 4.1.2). This provision is based on an interpretation of “business model” objectives that this paper reasons is conceptually unsustainable. Section E of the Appendix addresses the position taken in IFRS 9 on the relevance of amortized cost accounting in comparison with current market value for financial assets.
111. In summary, this paper concludes that a convincing conceptual case for the amortized cost basis cannot be sustained on the grounds that it has superior relevance to current market value. Rather, it is proposed that the historical cost basis may only be sustained on the basis of evidence that it is the most relevant substitute for the ideal (current market value as defined) that is practicable of faithful representation for particular assets or liabilities when current market price change effects are not practicable of faithful representation.

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<sup>12</sup> These include: IASB, 2008c; Financial Instruments Joint Working Group of Standard Setters, 2000; FASB, 1999; IASC, 1997; and Accounting Standards Board (UK), 1996.

### **Business operating financial assets and liabilities**

112. Many financial instruments are investing or financing assets or liabilities. However, some financial instruments are of a business operating nature. For example, accounts and notes receivable from customers are initially outputs of the processes that generated them. They, then, immediately become inputs to the entity's cash collection process. As such, they would be measured, under Principle 2, on the basis of prices in the markets in which they were acquired, that is, in the markets with the counterparties for these receivables. Similarly, loan assets of a lending institution are inputs to its credit granting and collection process, and would accordingly be measured on the basis of Principle 2. In addition, some entities are in the business of creating value from financial assets or financial liabilities, for example, by securitizing them, or by settling financial instruments acquired in markets with customers in different dealer markets. These financial assets and liabilities would be measured on the basis of proposed Principles 2 or 3 until conditions set out under proposed Principles 1 or 4 are met. It is to be emphasized that all financial assets and liabilities, whether considered to be operating, investing or financing in nature, would be measured on the basis of current prices in the markets in which they would be acquired, issued or incurred, or on the basis of best substitutes, pending meeting conditions for the recognition of any value created by the reporting entity's operating activities.

### **Input assets held for sale**

113. If an asset that has been acquired as an input to a cash-generating process is to be sold, then it would be considered to have been removed from its original input purposes. This may result in it becoming an investment asset. But it would not be an investment asset if it were to be sold in a different market from that in which it would have been acquired. For example, an input use asset might be sold for scrap. In this case, it continues to be an input asset, but its cash-generating process has changed to one of realization of its scrap value, and this output (exit) value would be recognized when the conditions of proposed Principle 1 are met. Until such time as the conditions of proposed Principle 1 are met, this asset would be carried on the same basis as an investment asset, because proposed Principles 2 and 5 would both require that it be measured at its current price in the market in which it would have been acquired, or when that price is not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. This would be its carrying value as an input to its original cash-generating process, which would reflect any impairment in this input value (see following section on impairment).

## Impairment (Principle 6)

114. An essential property of an asset is that it embodies expected future economic benefits. An asset does not have this property, and therefore is impaired, to the extent that its expected future economic benefits will not be sufficient to recover its carrying amount.

### Input assets<sup>13</sup>

115. Input assets may be evaluated for impairment at two levels (units of account) – first, at the level of the individual input asset, and second, at the level of the cash-generating unit as a whole.

#### *Individual input asset level*

116. Individual input assets measured at current prices in the markets in which they would be acquired will reflect the markets' evaluations of any changes (upward or downward) in their abilities to contribute to the generation of future cash flows. There would, therefore, be no need for any impairment adjustments to these market values.
117. However, when such current market values are not practicable of faithful representation on a continuous basis, proposed Principle 2 would require that one look for the most relevant substitute that is practicable of faithful representation. If this substitute measurement is cost-based, it will not necessarily reflect an input asset's ability to contribute to the generation of future cash flows. Cost-based accounting reflects only the costs invested in the asset if it is not supplemented by some basis for providing assurance that the asset's cost-based carrying amount is not impaired. This is also the case for self-constructed input assets, because they would be measured at the sum of the measures of the individual inputs that comprise them.
118. An individual input asset that is measured on a basis other than current market value may be considered to be impaired if a relevant and practicably measurable estimate of its current ability to contribute to the generation of future cash flows is less than its carrying amount. The appropriate measurement of this ability seems to depend on the type of input asset, as is illustrated by the following examples.
- Depreciable-use assets, such as plant and equipment. Such assets typically decline in their ability to contribute to the generation of future cash flows over time as they dete-

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<sup>13</sup> It has previously been noted that output assets become either input or investment assets immediately following their recognition. Thus, output assets do not give rise to separate impairment issues.

riorate physically and technologically. Impairment of individual use assets carried on a cost basis seems likely to be best addressed by rigorous and rational adjustments of expectations for their remaining useful lives, residual values, and depreciation patterns. See further discussion of this issue in relation to historical market value depreciation at section J of the Appendix.

- Finished goods inventory that has not qualified for revenue recognition under proposed Principle 1. This inventory is a self-constructed input asset. Its ability to contribute to the generation of future cash flows may be considered to be impaired to the extent that its current estimated net sales proceeds — after provision for selling, delivery and any other costs necessary to achieve sale, and related profit margins — are less than its cost-based carrying amount.
- Self-constructed intangible inputs, such as software and research and development. A relevant measure of the ability of such intangibles to contribute to the generation of future cash flows may be difficult to objectify and estimate on a basis that is practicable of faithful representation. But the current IASB standard on *Intangible assets* (IASB, 2004b) endeavours to do so. If the ability of an intangible input to contribute to the generation of future cash flows is not practicable of faithful representation, then it will presumably not qualify for recognition and measurement as an asset.

#### ***Cash-generating unit level***

119. The following principle is proposed:

**Principle 6: The sum of the carrying amounts of business operating assets less liabilities comprising a cash-generating unit should not exceed the current market value of that cash-generating unit or, if that market value is not practicable of faithful representation, of a current value substitute that is practicable of faithful representation.**

120. Measuring individual input assets at their prices in the markets in which they would be acquired in their present states, or on the basis of substitutes with provision for individual asset impairment as discussed above, does not recognize the effects of an impairment of an entity's cash-generating unit taken as a whole. A cash-generating unit is impaired if the current value of the net future economic benefits that are expected to result from its goods or services outputs is not sufficient to recover the sum of the carrying amounts of the operating assets less liabilities that comprise that unit. In this case, Principle 6 proposes that the sum of these assets less liabilities should be written down to the current value of the cash-generating unit. The ideal measurement of a cash-generating unit is the current price that the unit would realize in the market place. If this market value is not practicable of

faithful representation, one must look for a practicable current value substitute. If there is no practicable substitute, then there may be insufficient evidence that the cash-generating unit is impaired.

121. The application of proposed Principle 6 would result in reported operating income for a period being decreased by any impairment of a cash-generating unit occurring during the period, or increased by any recovery of impairment recorded at the beginning of the period.
122. Provisions for the impairment of a cash-generating unit would not require an arbitrary allocation to individual input assets, if the writedown is considered to be a “negative goodwill” offset allowance against the business operating assets comprising the cash-generating unit.
123. Principle 6 is proposed, recognizing that there are arguments against it that need to be considered. In particular:
  - It may be argued that there should be no writedown for impairment at the cash-generating unit-of-account level, because to do so is anticipating the results of cash-generating activities that have yet to take place. The counter argument is that the fundamental property of assets, that they represent expected future economic benefits, is violated if the current market value of the net assets of a cash-generating unit is less than the sum of their carrying amounts.
  - A related argument is that recognition of impairment at the cash-generating unit level is inconsistent with the *Conceptual Framework* “faithful representation” quality of “neutrality”. The argument is that such a provision would conservatively bias the measurement of the net assets of a cash-generating unit because it would provide for expected losses but not profits from its future operating activities. However, the quality of neutrality as defined in the IASB *Conceptual Framework* would not be compromised by this provision. It provides that: “A neutral depiction is not slanted, weighted, emphasized, de-emphasized or otherwise manipulated to increase the probability that financial information will be received favourably or unfavourably by users” (IASB, 2010b: para. QC14). The provision proposed by Principle 6 would convey neutral information about the current economic state of the entity by reflecting the effect of an unbiased measurement of the current value of the cash-generating unit in comparison with that of its net assets.
  - Further, there is some potential for circularity in measuring a cash-generating unit at its estimated current value, if that valuation is based in part on the entity’s reported income and asset and liability measurements. However, such circularity may not negate the decision usefulness of this current value estimate, because an objective valuation

of a cash-generating unit can be expected to factor in significant additional available information about the entity, its management, its prospects and economic conditions.

### **Investing and financing assets**

124. These assets would be measured on the same basis as individual input assets (see proposed Principles 2 and 5). As a consequence, if a cost-based substitute is considered to be appropriate under proposed Principle 5, it will have to be supplemented by some basis for evaluating whether the particular asset's carrying amount is impaired. This requires assessment of whether the present value of the asset's expected future economic benefits is less than this carrying amount. Following from proposed Principle 5, the basis for this estimated recoverable amount should reflect as nearly as is practicable the properties of current market value.

### **Supporting disclosures**

125. A valid numerical representation of an uncertain phenomenon requires more than its estimated single value. It also requires information about how it has been determined and the size and shape of the probability distribution around that value. Financial accounting cannot be expected to provide statistically precise information on measurement uncertainty. Nevertheless, these two dimensions of a measurement provide conceptual reference points for developing useful disclosures to support the measurement of assets and liabilities within the principles proposed in this paper. The following are some preliminary comments on these disclosures:

- The disclosure of assets and liabilities measured at current market values may need to be supplemented with descriptions that identify their operating, investing or financing purposes, the sources of market information and information about any models used to estimate current market values in order to help users assess whether the estimates may be subject to limitations or measurement uncertainties.
- Establishing current market value as the ideal would provide a benchmark against which useful information about substitute measurements could be developed. In particular, substitute measurements should be clearly distinguished from current market values, and their more limited properties, key assumptions, and significant measurement uncertainties disclosed.
- Measurement uncertainty should be clearly distinguished from risk and the volatility that results from taking risks. For example, the current market value of an asset or liability that is subject to particular risks may be highly volatile, but subject to little or

no measurement uncertainty. To illustrate, a quoted foreign exchange rate may have a readily observable current market value that is subject to virtually no measurement uncertainty. However, that rate may be highly volatile, constantly changing in response to changing economic conditions. While undoubtedly important, issues relating to the disclosure of the risk characteristics of assets and liabilities are not addressed in this paper.

## Capital maintenance implications

126. “The concept of capital maintenance is concerned with how an entity defines the capital that it seeks to maintain. It provides the linkage between the concepts of capital and the concepts of profit because it provides the point of reference by which profit is measured; it is a prerequisite for distinguishing between an entity’s return on capital and its return of capital; only inflows of assets in excess of amounts needed to maintain capital may be regarded as profit and therefore as a return on capital.” (IASB, 2010b: para. 4.60)
127. Thus, a valid conceptual measurement framework must have at its base a valid concept of capital (wealth) and income. The question then is: Would the principles proposed in this paper meet this requirement?
128. The concept of current market value that this paper proposes to be the most relevant (ideal) measure of assets and liabilities for financial reporting purposes embodies a particular financial capital maintenance concept. On the basis of this measurement ideal, the capital of an entity would equal the sum of the current market values of its individually recognized assets less liabilities in the markets in which they would be acquired, issued or incurred, less any provision for impairment at the level of the cash-generating units. This measure of capital (wealth) would represent the market’s valuation of the cash-generating ability of the entity’s net assets without any anticipation of value that is yet to be created by the entity’s cash-generating processes. Capital would then reflect the market value that has been achieved by the entity’s operating, investing and financing activities to the measurement date. At the same time, it would represent the market’s current evaluation of the cash-generating capacity of the entity’s net assets as inputs to the next period’s activities. The capital of an entity would, therefore, be maintained during a period if its portfolio of assets less liabilities at the end of the period maintained the market value of the portfolio at the beginning of the period, after adjustment for capital contributions and withdrawals.
129. The proposed principles recognize that the current market value ideal will not be practicable of faithful representation for significant assets and liabilities of most entities. The limitations of substitute measurements for assets and liabilities for which current market values are not practicable will necessitate a more limited interpretation of this capital main-

tenance concept. The concept of capital maintenance that underlies the principles proposed in this paper, and its implications, are further discussed in section L of the Appendix.

## V. SUMMARY CONSIDERATIONS

### A coherent theory?

130. Existing financial reporting standards and practices are generally considered to comprise a mixed measurement system, because they utilize a mixture of different measurement bases with no coherent overarching theory. It seems generally to be presumed that the various measurement bases used in financial reporting are separate, independent bases that have different objectives. The idea of a current market value ideal, with other measurement bases being evaluated in terms of their relative merits as best substitutes for the ideal, represents a major departure from this mixed-measurement thinking.
131. In summary, this paper proposes an approach to developing an overarching measurement framework for financial reporting that flows from the proposed relevance of current market value, as defined. The paper differs from existing standards and practices in its proposed definition of current market value, in its proposals with respect to where relevant markets are to be found for business operating, investing and financing assets and liabilities, and its proposals for evaluating other measurement bases as possible substitutes when current market value is not practicable of faithful representation.
132. The proposed principles would provide a measurement hierarchy, with the defined concept of current market value at its pinnacle, and with other measurement bases selected as substitutes in accordance with their relative abilities to represent some significant properties of current market value in particular circumstances when this ideal is not practicable of faithful representation. A measurement framework developed along these lines may be as close as financial reporting can expect to get to a coherent measurement theory.

### Judging the practicability of faithfully representing current market value and possible substitute measurement bases

133. The terms “practicable” and “faithful representation” merit careful attention. They have been defined in paragraphs 39-42 of this paper with financial reporting measurement purposes in mind. As noted there, and as further discussed in section A of the Appendix, the concept of “faithful representation” proposed in this paper seems to differ in some significant respects from its definition in the joint IASB/FASB Conceptual Framework.

134. Assessment of the practicability of faithful representation has a central, critical role in the proposed measurement framework. The crucial question is whether there can be a robust enough basis for judging the practicability of faithful representation of measurement bases to bear this weight. The following are some general considerations:
- The IASB Conceptual Framework establishes that the fundamental qualitative characteristics of useful financial information are relevance and faithful representation (IASB, 2010b: para. QC5). It further indicates that the usual process for applying these two fundamental qualitative characteristics is, first, to establish the most relevant information (e.g., the most relevant measurement basis) about an economic phenomenon (e.g., an asset), and then determine whether that information is available and can be faithfully represented. If the most relevant information cannot be faithfully represented, then one is to look to the next most relevant information (Ibid.: para. QC18). Thus, if the issue of relevance can be successfully resolved (that is, if there can be informed agreement on the most relevant measurement basis), then attention must focus on faithful representation (that is, on whether the agreed most relevant basis can be faithfully represented). Thus, an unavoidable requirement to judge the practicability of faithful representation follows necessarily from resolving what is most relevant.
  - One may then ask how the subjectivity of this crucial assessment could be managed, so as to achieve reasonable, informed, and consistent judgments. The proposed definition of current market value embodies certain identifiable measurement properties. These properties provide the basis against which to judge whether a measurement attempt faithfully represents current market value and, if not, to judge the comparative strengths and limitations of possible substitutes.
  - This definition of current market value and the proposed principles for its application do not provide a bright line for distinguishing faithful from unfaithful representations of current market value. But, it is proposed that they do provide a more precise, conceptually defensible, basis for judging the practicability of faithfully representing a measurement attempt than can be gleaned from existing standards and practice. In particular, existing fair value measurement standards define “fair value” in a way that does not articulate a clear, faithful representation threshold. Section H of the accompanying Appendix compares current market value with fair value.
135. In summary, the ability to judge when current market value is or is not practicable of faithful representation is critical to the viability of the measurement framework approach proposed in this paper. However, the need for judgment of the practicability of faithful representation seems to be an unavoidable judgment issue for any financial reporting mea-

surement theory. Representational faithfulness is, after all, a qualitative characteristic.<sup>14</sup> The assessment of the representational faithfulness of any attempt to achieve any measurement objective can be expected to require qualitative judgment. A clear definition of the ideal (current market value) and its properties provides, it is proposed, about as good a foundation for this judgment as seems likely to be possible.

### **A final note on judging practicability**

136. The framework proposed in this paper recognizes the necessity of cost-benefit (practicability) judgments, and the proposed principles indicate generally when these judgments would have to be made. But it does not attempt to make these cost-benefit judgments, in the belief that it is vital that the conceptual measurement framework itself not be compromised by cost-benefit considerations. These judgments would fall to accounting standard setters, and where standards are not explicit, to the presenters of financial information and their auditors. Standard setters might decide to depart from certain of the measurements that may be reasoned to follow from the proposed framework on the grounds of practicability.
137. The principles proposed in this paper would not necessarily result in more assets and liabilities being measured at current market values. This would depend on the judgment of standard setters and their constituencies on the practicability of their faithful representation. Experience and developments in markets and measurement theory may, over time, enable some evolution in the measurements that may be considered to meet the current market value practicable faithful representation condition.
138. By way of summary, the purpose of this paper is well expressed in the following paragraph from the IASB *Conceptual Framework*:

“To a large extent, financial reports are based on estimates, judgements and models rather than exact depictions. The *Conceptual Framework* establishes the concepts that underlie those estimates, judgements and models. The concepts are the goal towards which the Board and preparers of financial reports strive. As with most goals, the *Conceptual Framework*’s vision of ideal financial reporting is unlikely to be achieved in full, at least not in the short term, because it takes time to understand, accept and implement new ways of analysing transactions and other events. Never-

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14 The IASB *Conceptual Framework* examined whether faithful representation could be capable of being empirically measured. It observed that: “... previous frameworks discussed the desirability of providing statistical information about how faithfully a financial measure is represented.” However, the IASB and FASB boards stated that they “... have not identified any way to quantify the faithfulness of the representations in a financial report.” (IASB, 2010b: para.BC3.31)

theless, establishing a goal towards which to strive is essential if financial reporting is to evolve so as to improve its usefulness.” (IASB, 2010b: para. OB11).

# Appendix — Supporting Notes

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## A. Applying the Fundamental Qualitative Characteristics of Relevance and Faithful Representation to Measurement in Financial Reports

- A1. Chapter 3 of the *Conceptual Framework for Financial Reporting* (CFW), adopted in 2010 by the IASB in a joint project with the FASB, concludes that:

“If financial information is to be useful, it must be relevant and faithfully represents what it purports to represent. The usefulness of financial information is enhanced if it is comparable, verifiable, timely and understandable.” (IASB, 2010b: para. QC4)

These qualitative characteristics are to be applied subject to the cost constraint (Ibid.:paras. QC35-QC39).

- A2. This section of the Appendix considers how the fundamental qualitative characteristics of relevance and faithful representation may be interpreted in selecting measurement bases for assets and liabilities. It will be seen that some difficult questions arise in attempting to apply the qualitative characteristic of “faithful representation” as defined and explained in the CFW to the measurement of assets and liabilities, and that this paper defines “representational faithfulness” in more stringent terms than the CFW appears to do.

### The subject matter of financial reports

- A3. The CFW defines the fundamental qualitative characteristics of relevance and faithful representation in relation to the subject matter of financial reports, which subject matter it describes as follows:

“Financial reports provide information about the reporting entity’s economic resources, claims against the reporting entity and the effects of transactions and other events and conditions that change those resources and claims. (This information is referred to in the *Conceptual Framework* as information about the economic phenomena.)” (para. QC2)

- A4. Measurement clearly plays a crucial role in providing useful financial information about a reporting entity’s “economic phenomena”. This paper presumes that the financial reporting measurement objective is to select the measurement basis for a recognized asset or liability that provides the most relevant depiction of the economic phenomenon that is represented by the asset or liability that can be faithfully represented on a cost-effective basis.

## Relevance

- A5. To be relevant, a measurement must be capable of making a difference in the decisions made by users. This capability requires the measurement to have predictive value, confirmatory value or both, as specified in CFW paragraphs QC6-QC10. The decision purposes of primary users pertain to assessing:

1. “... the amount, timing and uncertainty of (the prospects for) future net cash inflows to the entity” (para. OB3), and

2. “... how efficiently and effectively the entity’s management and governing board have discharged their responsibilities to use the entity’s resources” (para. OB4).

- A6. This paper accepts this concept of relevance and has attempted to assess the relevance of measurement bases in terms of their capability for predictive and/or confirmatory value for these forward-looking and stewardship decision purposes.

## Faithful representation and its relationship to relevance

- A7. The CFW asserts: “To be useful, financial information must not only represent relevant phenomena, but it must also faithfully represent the phenomena that it purports to represent” (para. QC12).

- A8. Paragraph QC18 specifies what would “usually” be the most efficient and effective process for applying these two fundamental qualitative characteristics, “subject to the effects of enhancing characteristics and the cost constraint”. It sets out three steps. The measurement implications of these steps may be envisaged by considering their application to select the measurement basis for an asset. Let us suppose that the asset is an acquired input to a cash-generating process.

Step 1. “[I]dentify an economic phenomenon that has the potential to be useful to users of the reporting entity’s financial information.” In this case the economic phenomenon is the asset, as affected by the transactions and other events and conditions that change that asset.

Step 2. “[I]dentify the type of information about that phenomenon that would be most relevant if it is available and can be faithfully represented.” It is assumed that the “type of information” about the economic phenomenon (the asset) that would be relevant must include its measurement basis. Principle 2 of this paper proposes that the most relevant measurement basis for this asset is its current price in the market in which it was acquired.

Step 3. “[D]etermine whether that information is available and can be faithfully represented.” One must then determine whether the information that is essential to depict the current market value of this asset is available and can be faithfully represented.

- A9. Paragraph QC18 then provides that, if the most relevant information cannot be faithfully represented, “the process is repeated with the next most relevant type of information”.
- A10. This process is fully consistent with the measurement principles proposed in this paper. A critical determination required to implement these principles is that of assessing whether information that is essential to determining the most relevant measurement of a particular asset or liability “is available and can be faithfully represented”. This, the paper proposes, requires a sound and robust concept of “faithful representation”. This paper proposes, in paragraph 40, that:

... to be a faithful representation, the application of a measurement basis to an asset or liability should result in a number that can be demonstrated to reasonably represent the essential properties of that measurement basis within a range of materiality that is relevant to users of the entity’s financial report. This, in turn, requires reasonable substantiating evidence, so that users of financial information can have confidence that depicted measurements of assets and liabilities are faithful representations of what they purport to depict. It is suggested that the concept of “verifiability” as defined in the IASB *Conceptual Framework* provides an appropriate standard of substantiating evidence. In other words, measurements for financial reporting purposes should be capable of reasonable substantiation of their faithful representation on the basis that “different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation”. (IASB, 2010b: para. QC26)

- A11. However, the concept of faithful representation adopted in the CFW seems not to require substantiation of the measurability of a measurement basis, but rather indicates that disclosure can compensate for unavailability of essential information about the economic properties that define a measurement basis, that is, that define what that basis purports to

represent. The particular provisions that define the CFW concept of faithful representation are analyzed below.

- A12. CFW paragraphs QC12-QC16 identify and explain three characteristics of faithful representation: completeness, neutrality and freedom from error.

Freedom from error. Paragraph QC15 explains that “free from error does not mean perfectly accurate in all respects”. This is illustrated using a measurement example that begins with this assertion: “For example, an estimate of an unobservable price or value cannot be determined to be accurate or inaccurate.” It then concludes:

“... a representation of that estimate can be faithful if the amount is described clearly and accurately as an estimate, the nature and limitations of the estimating process are explained, and no errors have been made in selecting and applying an appropriate process for developing the estimate.”

Let us continue to suppose that current market value has been determined to be the most relevant measurement basis for a given asset. The above quotations from paragraph QC15 indicate that an attempt to estimate the current market value of this asset could meet the “freedom from error” characteristic of faithful representation by providing the noted disclosures and an error-free application of “an appropriate process”, even if pertinent information about its current market price or value is unavailable. What may be considered to be “an appropriate process” is not explained, but the paragraph is clear that an appropriate process could be developed in the absence of observable price and value information.

The other two characteristics of faithful representation are completeness and neutrality.

Completeness. The completeness characteristic pertains to the information (“descriptions and explanations”) necessary for a user to understand the phenomenon being depicted. By way of example, paragraph QC13 explains that a complete description of a group of assets would include a description of the nature of the assets, a numerical depiction of them, and a description of what the numerical depiction represents, “for example, original cost, adjusted cost or fair value”. It further explains that: “For some items, a complete depiction may also entail explanations of significant facts about the quality and nature of the items, factors and circumstances that might affect their quality and nature, and the process used to determine the numerical depiction”.

Completeness therefore pertains to the sufficiency of information about a “numerical depiction” (a measurement basis). How might this be interpreted to apply to the selection of a measurement basis (i.e., to apply step 3 of paragraph QC18)? Might the completeness characteristic be considered to fail if essential relevant information about the price or value of the numerical depiction (measurement basis) that has been determined to be the most relevant for a given asset or liability is unavailable? It appears that this possibility has been overridden by the assertion of paragraph QC15 – that an estimate of an unobservable price or value can be a faithful representation if the disclosures set out in paragraph QC15 are provided and an appropriate process is followed without error.

Neutrality. A numerical depiction of an asset or liability will meet the neutrality characteristic of representational faithfulness if it “... is not slanted, weighted, emphasised, de-emphasised or otherwise manipulated to increase the probability that financial information will be received favourably or unfavourably by users” (para. QC13). This seems to require evidence of intention to bias. It seems likely that most estimates of an unobservable price or value could be made without violating neutrality, that is, without there being evidence of intention to bias.

Thus, the characteristics of completeness and neutrality, as defined, seem capable of being met in respect of an estimate of an unobservable price or value.

- A13. It may be argued that the measurement uncertainty of, say, an estimate of an unobservable current market value of a particular asset will be embodied in the measurement itself. In other words, measurement uncertainty will be reflected in estimated probability weightings of future cash flows, and by discounting the estimate of current market value for mismeasurement risk. But this does not seem to result in a faithful representation of its current market value if there is little or no evidential market support for these weightings and discount. This paper does not dispute the need for the disclosures and “appropriate process” provided for in paragraphs QC13 and QC15 to achieve faithful representation. But, it reasons that no amount of disclosure or process can compensate for the unavailability of information that is essential to representing the fundamental properties of a measurement basis. As an example, this paper would not accept an estimate to be a faithful representation of current market value when that estimate is based only on the private expectations of the reporting entity that cannot be substantiated by observable market-relevant evidence.
- A14. The apparent lack of a measurability condition within the CFW fundamental qualitative characteristic of faithful representation is reinforced by two other provisions in Chapter 3, “Qualitative characteristics of useful financial information”.

- Verifiability. The CFW considers verifiability to be a desirable enhancing characteristic, but not a necessary condition for achieving faithful representation. In order to assess the implications of this exclusion, it is important to examine how “verifiability” is defined:

“Verifiability means that different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation.” (para. QC26)

First, this definition is puzzling because it defines verifiability as a judgment of faithful representation. In other words, faithful representation seems to be the objective of this definition of verifiability.

Second, this definition is modest in comparison with the common dictionary definition, which is to demonstrate “truth or correctness”.<sup>15</sup> The CFW definition does not require the demonstration of absolute truth or correctness, but only that observers who are independent of the reporting entity and who are knowledgeable would generally agree that a particular depiction is a faithful representation of what it purports to represent. The reason given for excluding “verifiability”, as defined, from faithful representation is that the Board agreed with respondents who:

“... pointed out that including verifiability as an aspect of faithful representation could result in excluding information that is not readily verifiable. Those respondents recognised that many forward-looking estimates that are very important in providing relevant financial information (for example, expected cash flows, useful lives and salvage values) cannot be directly verified. However, excluding information about those estimates would make the financial reports much less useful.” (para. BC3.36) [Note that this paragraph subtly replaces “verifiable” with “readily verifiable” and “directly verifiable”.]

This contention does not seem to be supportable. It seems much more reasonable to expect that forward-looking estimates that are “very important in providing relevant financial information” should be capable of being reasonably substantiated on the basis of the CFW definition of “verifiability”. More specifically, it is suggested that estimates of useful lives and salvage values of fixed assets, and of future cash inflows to be received from, for example, loan assets, should be expected to be capable of

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15 The primary definitions of “verification” in the *Shorter Oxford English Dictionary*, 5<sup>th</sup> ed.: “1. The action of demonstrating or proving something to be true by evidence or testimony; formal assertion of truth. 2. Demonstration of truth or correctness by facts or circumstances. 3. The action of establishing or testing the accuracy or truth of something.”

reasonable substantiation on the basis that “different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement” that these estimates are faithful representations of what they purport to represent. The term “knowledgeable” may be defined for measurement purposes to encompass a reasonable understanding of (a) the conceptual framework, principles, standards, and practices of financial reporting; and (b) the type of asset or liability being measured and the types of transactions and other events and circumstances that could affect its measurement within the measurement basis being applied.

The concern is that excluding this concept of “verifiability” from faithful representation emasculates the basic purpose of this fundamental qualitative characteristic which is to provide users with a supportable basis for having reasonable confidence that a represented measurement basis does faithfully represent the essential economic properties that it purports to represent.

- Materiality. The CFW considers materiality to be an “entity-specific aspect of relevance based on the nature or magnitude, or both, of the items to which the information relates in the context of an individual entity’s financial report” (para. QC11). It provides the following explanation:

“... materiality is an aspect of relevance, because immaterial information does not affect a user’s decision. Furthermore, a standard setter does not consider materiality when developing standards because it is an entity-specific consideration.” (para. BC3.18)

This seems to leave open how to assess the significance of shortfalls in the faithfulness with which an attempted measurement represents what it purports to represent (i.e., in assessing whether step 3 of the process set out in paragraph QC18 is met).

This paper accepts that materiality is an entity-specific consideration and that it pertains to the capability of making a difference in the decisions made by users. But, it is suggested that user decisions can be affected by the representational faithfulness of the measurements of assets and liabilities and that the distinction of a faithful from an unfaithful representation of a measurement basis involves consideration of the “nature or magnitude, or both” of the imperfections in the ability of an attempted estimate to depict the essential properties of that measurement basis.

- A15. In summary, the above paragraphs of the CFW seem to indicate that no minimum measurability condition is necessary to justify the representational faithfulness of a purported measurement basis, no matter what may be the extent of its measurement uncertainty

or lack of observable supporting evidence about the essential properties that define that measurement basis (i.e., that define what that measurement basis purports to represent).

### **Measurement uncertainty and faithful representation**

- A16. CFW paragraph QC16 advises that a highly uncertain estimate may not be “useful”, which it interprets to mean that the relevance of the representation is “questionable”. In such cases, it calls for the relevance of the representation to be re-evaluated, but concludes that, if there is no better alternative, “that estimate may provide the best available information”.
- A17. How might this advice be interpreted in applying the qualitative characteristic of faithful representation to highly uncertain measurement estimates? First, paragraph QC16 underlines the emphasis of the CFW on relevance. It might be inferred from this that faithful representation simply means to tell the truth about what an estimated number is (e.g., that a highly uncertain estimate may be faithfully represented as a highly uncertain estimate). This paper accepts this, but reasons that this expectation needs to be much more fully developed to enable a coherent measurement framework. An uncertain estimate of, for example, the current market value of an asset or liability needs to be evaluated with respect to whether it may be too uncertain to be justifiable as a faithful representation of the essential properties of current market value. At the extreme, an estimate may be little more than a guess if there is little or no relevant observable information available on which to base it. Someone can always come up with a number, but, as paragraph QC16 observes, the number may not be useful. A highly uncertain estimate may not be faithfully represented as being the same as an observable price in an open, active and orderly market.
- A18. The CFW noted that: “Unfortunately, the boards have not identified any way to quantify the faithfulness of the representations in a financial report” (para. BC3.31). Nevertheless, the CFW clearly presumes that reasonable qualitative judgments of faithful representation can be made. The need, then, is to develop a frame of reference for judging the faithful representation of measurement estimates.
- A19. The general parameters of the foundation for a frame of reference are envisaged in this paper as a measurement-uncertainty hierarchy. Current market value is at the top. Its definition, embodying its essential properties, provides the basis against which the faithful representation of estimates of current market value would be judged. Reasoning from CFW paragraph QC16 above, a highly uncertain estimate of current market value may be of questionable usefulness (relevance) as a representation of the properties of current market value. The measurement objective proposed in this paper is to employ the measurement that most nearly embodies the essential attributes of current market value. A highly uncertain current present value estimate based on private information and expectations

may be the nearest most relevant measurement that is practicable of faithful representation for a particular asset or liability. If this is the case, it should be described as what it is, not represented to be current market value. In other cases, other measurement bases (perhaps current replacement cost, deprival value, current reproduction cost, or historical market value or historical cost), may be judged to be the most relevant substitutes that are practicable of faithful representation in particular circumstances, in which cases they should be described as what they are.

- A20. It may be expected that, as experience is gained in working with this hierarchy, standards or guidelines may be developed to facilitate rational and consistent judgments with respect to when estimates do, and do not, faithfully represent what they purport to represent.

### **Summary position of this paper**

- A21. In summary, this paper is premised on reasonably substantiating the representational faithfulness of measurement bases. This section of the Appendix has attempted to explain and justify that position, and to compare it with the apparently different position taken by the CFW adopted by the IASB, and FASB, in 2010.



## **B. The Role of Markets and Market Efficiency in Defining “Current Market Value” for Financial Reporting Measurement Purposes**

- B1. Traditional economic pricing theory focuses on equating the supply and demand of scarce resources. The theory presumes that an economic entity is motivated to maximize its utility function, given its tolerance for risk. A business entity’s utility function is envisaged for financial reporting purposes in terms of net cash, or equivalent, return for risk assumed. The buying, processing and selling activities of business entities are therefore considered to be motivated to achieve the maximization of a utility function that is based on cash-flow generation. (See basic premise 1 on the economic purposes of profit-oriented entities, at paragraph 13 of the paper.)
- B2. Individual business entities put different values on goods and services because different entities have different expectations, risk perceptions and risk preferences. The market then serves to bring together buyers and sellers who are competing for scarce goods and services on the basis of differing value expectations. The interaction of competing buyers and sellers in an open market drives the price for a good or service towards the price that equates supply and demand. Of course, the market is a dynamic process, with continuously changing prices as expectations and risk perceptions and preferences change in reaction to changes in supply and demand and general economic conditions.

### **Market efficiency**

- B3. This paper proposes that a reasonable level of market efficiency is the essence of what prices in open, active and orderly markets represent, and that reasonable market efficiency imbues current market value, as defined in this paper, with uniquely relevant properties for financial reporting measurement purposes. The basis for this proposition of reasonable market efficiency lies in the weight of theoretical and empirical evidence contained in a large body of literature that is continuing to evolve.
- B4. The “efficient market hypothesis” (EMH), in its most commonly accepted “semi-strong” form, holds that prices in open, active and orderly markets rapidly incorporate publicly available information. An efficient market price for a good or service may then be considered to incorporate publicly available information about current events and conditions

affecting its supply and demand, and about the timing, amounts, and uncertainties (risks) of its future economic benefits (ultimately cash flows).<sup>16</sup>

B5. The author undertook an examination of the issues, arguments, and evidence on the relationship between market values and efficient markets contained in recent literature on market efficiency, and on evidence of inefficiencies and their implications for the ability of EMH to explain what market prices represent (Milburn, 2008). It is proposed that the weight of evidence indicated by current efficient markets literature may be summarized as follow:

- Virtually no one believes that any markets are perfectly efficient.
- There is, however, reasonably compelling evidence and a significant level of consensus among informed students of the issues that markets do not need to be perfectly efficient for the theory to be valid and useful.
- Market efficiency is a relative concept. Levels of market efficiency vary depending on the quality of information that is publicly available, and on the effectiveness of the institutions that regulate a market. The level of market efficiency can be affected by particular events, for example, by events leading to a liquidity crisis (see further comment below).
- Although there is unequivocal evidence of significant market inefficiencies, an extensive body of theoretical and empirical research indicates that a level of efficiency sufficient to justify the validity and usefulness of EMH can generally be presumed to exist in informed, open, active, and orderly markets. In other words, EMH is not regarded in the world of finance and capital markets as an empty theory without real-world relevance.

Some elaboration on these proposed conclusions follows.

B6. Compelling evidence of market efficiency is to be found in the extensive body of market-based empirical research in academic accounting literature. This research is directed at rigorously investigating the value relevance of various items of financial and other data

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<sup>16</sup> Efficient market prices can be conceptualized as reflecting “consensus expectations”, that is, under efficient market conditions, the heterogeneous expectations of participants resolve themselves into a price that behaves as if all participants held the same expectations (see Verrecchia, 1979). This implies that an efficient market price can be expected to reflect consensus expectations of future cash flows discounted at the current market rate of return for commensurate risk.

based on evidence of market price change effects in response to the disclosure of that data. The basis for this research has been summed up by one of its most respected authorities:

“Much of financial reporting is premised on the notion that once firms make accounting data publicly available, the implications will be widely appreciated and reflected in security prices.” (Beaver, 2002: 453)

- B7. The relative, variable nature of market efficiency is demonstrated by general acceptance of the idea that by improving publicly available information (e.g., by improving accounting standards) market efficiency can be improved. The significance and potential variability of effective regulatory institutions is recognized, for example, in the U.S. Securities and Exchange Commission statement that an important part of its mission “. . . is to maintain fair, orderly, and efficient markets” (SEC, 2006).
- B8. It is also notable, that a review of arguments that have been typically put forward by the FASB and IASB in support of the relevance of “fair value” indicates an implied presumption of reasonably efficient markets (see Milburn, 2008: 303-04).
- B9. No literature on efficiency of other than capital markets was discovered as a result of the author’s literature review. It is clearly important to consider how well the concept of market efficiency applies to markets for goods and services. This paper presumes that the basic concept has general application to all markets.

### **The conditions of reasonable market efficiency**

- B10. This paper proposes that a reasonable level of market efficiency is the essence of what prices determined in open, active and orderly markets represent. The definition of current market value proposed in this paper reflects this:

The current market value of an asset or liability is its present exchange price determined, on the basis of publicly available information, by the competitive interaction of willing arm’s length buyers and sellers in an open, active, and orderly market.

- B11. The conditions embodied within this definition are listed and briefly elaborated upon below (see also Milburn, 2008: 305-306):
- Openness. The market should be open to all parties who have a direct interest in the underlying asset or liability, so that at any moment all potential participants who want to transact are able to do so.

- Activity. There should be sufficient trading activity to enable the interaction of a broad representation of competing participant interests, resulting in sufficient frequency and volume of transactions to provide current pricing information.
- Public information basis. Sufficient information should be publicly available to enable informed buyer-seller activity.

Markets could be considered to be efficient with respect to whatever information is publicly available, so that, if little information is available, markets could be efficient in processing that information. However, market efficiency is generally viewed in a broader context of relative efficiency depending on the availability of relevant, reliable and timely information. This is seen in, for example, the roles of accounting standard setters and securities regulators to ensure the provision of sufficient financial information to provide the basis for a reasonable level of efficiency in business-entity capital markets.

- Willing arm's length participants. Market prices should not be driven by transactions involving participants who are under compulsion to transact at disadvantageous prices, as a result, for example, of being under the control of another party, or being forced to liquidate assets at distressed prices.
  - Regulation and oversight. There should be sufficient regulation and oversight of market activities to provide assurance of a "fair game". Depending on the market, this might include regulations on insider trading, independent regulator surveillance of market activity for signs of irregularities, and regulation of market intermediaries. This condition is intended to be reflected in the term "orderly" in the above proposed definition of current market value.
- B12. Current market value, so defined, may be faithfully represented by observable market prices or by employing accepted models that incorporate the assumptions and observable inputs that market prices can be expected to embody. (See, for example, discussion of the relationship of present value to market value later in this section). Key questions revolve around judging tolerances for imperfections that may be accepted in applying these conditions. For example, what tolerances should be accepted for information asymmetry or market illiquidity in estimates of current market value? It is beyond the scope of this paper to try to apply practicability of faithful representation to the wide range of diverse assets and liabilities and possible circumstances. This will require informed judgment of the availability of market information and pricing models, and of cost/benefit considerations, that are pertinent to different types of assets and liabilities and circumstances. These judgments rest with financial accounting standard setters, or in the absence of definitive standards,

with the preparers of financial reports and their auditors. Such judgments may change over time as markets and relevant technologies evolve and develop.

### **The measurement properties of reasonably efficient market prices**

B13. This paper proposes that current market value, as defined, embodies the following properties that, taken together, provide the basis for its claim to relevance for financial reporting measurement purposes.

- a) An estimate of future economic benefits or sacrifices (ultimately cash flows) to result from events or circumstances that have taken place.

This property enables a measurement to meet the accepted definitions of “assets” and “liabilities”. The causal connection between expected future economic benefits and past events or activities for operating assets is proposed in Principles 1 and 2. Under Principle 1, the future expected economic benefits of an output asset are those that have been achieved by a cash-generating process. Under Principle 2, the future expected economic benefits of an input asset are those that have been acquired by the entity and continue to exist at the measurement date.

- b) An expectation of possible variations in the amounts and/or timing of future economic benefits or sacrifices (reflecting expected value probabilities that take into account all perceived possible outcomes).
- c) The time value of money represented by the “risk-free” rate of interest.
- d) A price for bearing uncertainties of the economic benefits or sacrifices inherent in the asset or liability.
- e) The incorporation, based on publicly available information, of conditions with respect to properties (a)-(d) above that are current at the time of measurement.
- f) A price that reflects the relative economic efficiency and effectiveness of competing alternatives to the asset or liability as a consequence of incorporating publicly available information.
- g) A price that is independent of the private expectations or intentions of individual entities.

- B14. Except for explicit incorporation of publicly available information in (e) above, and the reference in (f) above to competing alternatives, this list is consistent with the elements of present value estimates of fair value set out in FASB Statement of Financial Accounting Concepts No. 7 (FASB, 2000: paras. 23, 24a, 25, and, re (g) above, para. 36).
- B15. The proposal of superior relevance for current market value, as defined, may be tested by examining the measurement properties of other possible measurement bases. Do other measurement bases have different properties that could be considered of greater relevance than those of current market value as it would be applied in the principles proposed in this paper? This paper proposes, based on the presented analyses, that other identified measurement bases lack one or more of the properties of current market value, and do not have any additional more relevant properties.

### **A note on illiquid markets**

- B16. The recent financial markets' "melt down" provides an instructive lesson in the relative efficiency of capital markets, and a test of the proposals of this paper. Much has been said and written about this financial crisis, including diverse views on the role of fair value measurement. An in-depth examination of the financial reporting measurement issues arising from this markets' crisis is beyond the scope of this paper. However, some comments are ventured on possible implications for the proposed concept of current market value and the principles proposed in this paper.
- B17. During the financial crisis, security prices were largely driven by a lack of liquidity, so that transactions taking place tended to be at distressed prices. This was exacerbated by major information asymmetry issues resulting because potential buyers believed that they did not have sufficient reliable publicly available information about securities offered for sale (whether they were bargains or "lemons").
- B18. Thus, the normal levels of reasonable market efficiency in these financial markets temporarily disappeared. The financial crisis demonstrated that market efficiency is a relative concept, and that some events can cause it to vary (in this situation, drastically). During this period of market illiquidity, securities' current market values, as defined, would not have been practicable of faithful representation. Under the principles proposed in this paper, entities would have had to look for the most relevant substitute(s) that would be practicable of faithful representation. This may have required entities to fall back on their private information and expectations about their particular assets. Such estimates of impaired current values would, in accordance with the proposals of this paper, be required to be clearly distinguished from current market values and supported by disclosures of the

key assumptions made and the measurement uncertainties and limitations of the estimates relative to current market value measurements.<sup>17</sup>

- B19. Questions may be raised as to whether observable security market prices prior to recognition of the underlying problems leading to the crisis met conditions of reasonable market efficiency (i.e., whether the above proposed conditions of open, active and orderly markets existed. The answer would seem to be “yes”, that the conditions proposed above would seem likely to have been met. The crisis demonstrated, as have other “bubbles”, that market efficiency does not provide assurance that subsequent events will not expose weaknesses (bubbles) that were not detected or appreciated (incorporated in market prices) on the basis of previously available public information.<sup>18</sup>

### **The relationship of present value to market value<sup>19</sup>**

- B20. All assets are acquired by profit-oriented entities with the expectation that they will generate, or contribute to generating, future economic benefits (ultimately cash inflows). This expectation, as has been noted earlier, is at the core of the definition of “assets”. Similarly, all liabilities are incurred with the expectation of future economic sacrifices (ultimately cash outflows).
- B21. The market value of any asset or liability embodies the current market assessment of the present value of its expected future cash flows discounted at the currently available market rates<sup>20</sup> of return for the time value of money and attendant risks. The embodiment of present value may be most readily apparent in the market prices of loans and bonds, but it extends to all assets and liabilities.

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17 Laux and Leuz, 2009 examined some fundamental issues relating to fair value measurement vis à vis alternatives during the recent financial crisis.

18 A recent evaluation by Ray Ball, one of the pioneers of efficient markets research, of the implications of the financial crisis for efficient markets theory observed that there is no support for what he termed “counterfactual” adjustments of market prices, by for example, mutual funds, during asset bubbles. He concluded: “My conjecture is that investors and courts would not trust the fund managers to know *ex ante* when they are at a peak or a trough. In other words, as a practical matter, bubbles may only exist in hindsight. Contemplating the fanciful nature of the counterfactual helps us to understand why the practice of relying on actual security market prices is so entrenched in commercial practice, in law, and in regulation. They are efficient enough, despite anomalous evidence against the EMH. When push comes to shove, what is the practical alternative?” (Ball, 2009: 16)

19 A primary source for this discussion is FASB Statement of Financial Concepts No. 7: *Using Cash Flow Information and Present Value in Accounting Measurements* (FASB, 2000).

20 This refers to rates rather than a single rate because the market value of cash flows to be received at different future times will be discounted at different rates depending on the yield curve existing at the measurement date.

- B22. When the current market price of an asset or liability is directly observable, the market assessment of present value is incorporated in the price, so that there is no need to apply present value principles to measure its current market value. However, in order to break out the effects of changes in the market values of assets and liabilities during a period, presumptions must be made to separate the effects of changes in their future cash flow expectations during that period from the effects of changes in the market interest rates (ideally distinguishing their risk components) at which they should be discounted.<sup>21</sup>
- B23. When the current market value of an asset or liability is not observable, a present value estimate may be attempted. The objective of a present value estimate is “to capture the elements that taken together would comprise a market price if one existed . . . ” (FASB, 2000: para. 25). This requires estimating the timing and amounts of the future cash flows that are expected to be the basis of the market price and the interest rates that would be used in the market place to discount them.
- B24. It is important to assess what may constitute credible bases for these present value estimates, that is, when a present value estimate can be accepted to result in a faithful representation of current market value. The problem is that the expected future cash flows embodied in a market value are not observable. More than this, there may be no unique set of cash flow expectations underlying the market value of an asset or liability. This is because the market price of an asset or liability is the result of the interaction of competing buyers and sellers with different expectations for the future timing, amounts and uncertainties of future cash flows. The current market price at which buyers and sellers agree to transact does not require any agreement on future cash flow expectations. Some argue that this lack of a unique observable cash flow stream means that there can be no conceptually sound basis for present value estimates of current market values.
- B25. However, this may not be the insuperable problem in practice that it might seem to be in theory for many common financial assets and liabilities. Under normal market conditions, financial assets and liabilities with contractually determinable cash flows may have reasonably predictable probable streams of future cash flows, and reasonable estimates of current market risk-adjusted interest (discount) rates may be practicable of reliable extrapolation from observable relationships between market prices and contractual cash flows of bonds and loan instruments of various terms and risks, at least in developed countries.
- B26. Whether the current market value of a given asset or liability is practicable of faithful representation by a present value-based estimate will depend on how well the market’s present

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21 See discussion of issues relating to determining these rates at Financial Instruments Joint Working Group of Standard Setters, 2000: paras. 6.1-.84.

value expectations can be modeled and whether sufficient current information is available about the inputs that the market could be expected to incorporate within that model. Major uncertainties may inhibit the ability to utilize present value techniques to faithfully represent current market values in particular circumstances, and for some financial instruments, potentially including some exotic derivatives, some private equity securities, and liabilities with highly uncertain future cash outflows. In these situations, this paper calls for the use of the most relevant substitutes that are practicable of faithful representation. These may be present value estimates that incorporate private entity information, assumptions, and expectations. Since non-financial assets do not represent future contractual cash flows, they are less amenable to present value-based estimation than financial instruments.



## C. Current Market Value Compared with Private Entity-Based Measurements

- C1. An argument that is commonly raised in support of private entity-based measurements is that an entity's management should be expected to be more knowledgeable about its assets and liabilities and their value than other participants in the market place. In other words, management of a typical business entity may be expected to have knowledge that is not publicly available and to have other advantages or disadvantages that are not incorporated in current market prices. The argument, then, is that reporting assets and liabilities using accounting bases that reflect management's knowledge, intentions, and expectations should be expected to be more relevant than current market values.
- C2. The principles proposed in this paper accept that a typical business entity can be expected to have, or perceive that it has, advantages over other participants in the market place. But, it is reasoned that the critical issue for financial reporting purposes is *not* whether business entities have advantages over the market place, but rather when and how an entity's advantages or disadvantages should be recognized and measured. Under the principles proposed in this paper, the economic effects of a business entity's superior knowledge and other advantages or disadvantages relative to other market participants would be recognized only when they are achieved and validated by market prices that are practicable of faithful representation; operating income would be reported when this takes place. This has important stewardship implications since an entity would be accountable for income that has been achieved by its cash-generating processes and validated by market prices.
- C3. The recognition of a private entity's perceived advantages or disadvantages before they are validated by market value would result in reporting income on the basis of differing management perceptions, expectations and intentions, with consequent different measurements of similar assets and liabilities. It would result in "recognizing in profit today the effects of such management skills or synergies that have not yet been demonstrated" (Barth, 2010: 123). Private entity-based measurements could change with changes in management's expectations or intentions without the occurrence of any external economic event. Private entity measurements may reflect real advantages over other market participants or they may reflect expectations that will not be realized. Only time and the market prices achievable for the outcomes of the entity's activities will tell.

- C4. The proposition that recognition of value created be validated by market values rather than private entity expectations is consistent with the conclusion of FASB Statement of Financial Accounting Concepts No. 7 (FASB, 2000: paras. 32-6). This conclusion does not deny that there can be decision usefulness in information about management expectations and intentions. But, reasoning from this conclusion, such information would be appropriately provided as supplementary disclosures or as separate management forecasts rather than used as the basis for recognizing and measuring value achieved by an entity's activities. The FASB Statement observed that: "While the expectations of an entity's management are often useful and informative, the marketplace is the final arbiter of asset and liability values" (Ibid.: para. 36).

### **The role of private entity-based measurements as substitutes for current market value**

- C5. Proposed Principles 2, 3 and 5 provide that when the current price of an asset or liability in the market in which it would be acquired, issued or incurred is not practicable of faithful representation, the most relevant substitute that is practicable of faithful representation should be used. Such substitutes may have to be based in some part on private entity expectations. Amortization of the historical market value of use assets is one example, since it reflects entity estimates of useful lives, residual values and patterns of benefit. Some operating liability provisions, such as an estimated obligation under a lawsuit, may also have to depend in some significant degree on management's expectations.
- C6. Since the objective of proposed Principles 2, 3 and 5 is to represent prices in input markets from the perspective of the reporting entity, such private entity-based measurement or allocation substitutes could not result in any recognition of value that is yet to be achieved by the entity's cash-generating processes. In addition, since these substitute measurements or allocations must be practicable of faithful representation, they should be capable of reasonable substantiation (see discussion of the qualitative characteristic of "faithful representation" in section A of this Appendix). Finally, the basis of a private entity measurement or allocation should be clearly disclosed along with its limitations in comparison with current market value. Thus, private entity-based measurements or allocations could serve as relevant practicable substitutes for current input market prices.

## D. Input Asset Price Change Effects

- D1. Under proposed Principle 2, input assets would be continuously remeasured at their current input values when these values are practicable of faithful representation. This would be a substantive change from existing generally accepted accounting principles, a change that has been strongly opposed by a significant portion of the accounting community.
- D2. This section attempts, first, to identify and assess the primary arguments that have been made against the relevance of measuring input assets at current prices in the markets in which the inputs would be acquired. It then turns to the practicability of faithfully representing these prices.

### Relevance

- D3. A wide range of arguments has been made against the relevance of measuring input assets at their current costs. These arguments take a variety of forms that can be difficult to untangle so as to identify their common elements, assumptions, and the chain of reasoning on which they are based. In order to focus on the fundamental relevance arguments, let us assume that an entity has acquired a non-perishable commodity as an input to its cash-generating process and that this commodity is actively traded in an open, well regulated market. Market price changes for this input asset will not be affected by physical deterioration or other factors that may limit its useful life. Use assets that depreciate in value over time or are otherwise subject to physical deterioration are considered later in this section.
- D4. The following is an attempt to capture the essence of the basic arguments made against the relevance of measuring input assets at current prices in the markets in which they would be acquired and the responses that may be made to them. These arguments are effectively arguments for accounting for input assets on an historical cost basis or an historical market value basis. It will be seen that they overlap in some significant respects, but each has a different focus; it is important to try to understand how they interrelate.<sup>22</sup>

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22 Sources for this discussion include the seminal work of Edwards and Bell, 1961; Barton, 2000; Stevenson, 2007; Bezold, 2009; Bezold, 2010; Biondi, 2011; Penman, 2011, ch.8; and correspondence with some respondents to an earlier draft of this paper. See also D. Mosso, 2011, who advocates in general terms, a “wealth accounting” model under which all assets and liabilities in primary financial statements would be measured at “fair value”, but on an entry value basis.

## 1. Revenue anticipation

- D5. Argument: There is no conceptual basis for recognizing input asset price change effects in advance of the recognition of the future revenues that will result from their use. The only source of income from input assets is through their contribution to the achievement of future revenues. In other words, recognition of holding gains or losses on input assets anticipates income effects that will not be achieved until the future revenues that will result from their use are realized. A change in the market price of an input asset might or might not affect future output revenues, but has no necessary causal effect on such revenues. As a result, no part of these future revenues should be anticipated. On the basis of this argument, current recognition in income of holding gains and losses on input assets would not meet proposed Principle 1.
- D6. Response: The current market price of, for example, the commodity input defined above is simply measuring the current cost of the entity's investment in that input. Its current market price is the result of independent market forces that do not anticipate the outcome of the acquiring entity's cash-generating processes. Since input market price changes are independent of an entity's cash-generating activities, the recognition of their effects by the entity does *not* anticipate the results of the acquiring entity's future cash-generating activities. The above argument is wrongly attributing entity output value expectations to the market's current measure of input asset cost.

## 2. Cash-flow effects

- D7. Argument: So-called input asset "holding gains and losses" have no cash flow effects in and of themselves because input asset price change effects are realized only when the revenues resulting from their use are realized. This is similar to Argument 1, except that it focuses on cash-flow effects.
- D8. Response: The difference between an input asset's transaction price and its current price in the market in which it was acquired represents a saving or loss relative to the price that the entity would have to pay for it currently. This is generally described as an "opportunity cost or saving". Opportunity costs or savings are dismissed by advocates of historical cost on the basis that they do not have any real cash flow effects. They believe that the only real cash flow effects are those resulting from the transactions of the entity (i.e., the cash paid for the commodity and the cash received from the sale of the resulting outputs). The market-based opportunity cost concept interprets cash flow implications in a broader accrual context. In this broader context, the opportunity gains and losses resulting from input asset price changes do have relevant cash flow implications for the entity. The acquisition of the commodity at less than its current market price represents a cash outflow saving to the entity.

Since this saving does not have any necessary consequences for the amount of cash flows that will be realized from future revenue generating activities (see response to Argument 1 above), the cash flow saving consequence of the commodity market price change can be considered to be independent of the cash flows to result from future revenues.

- D9. In summary, it is reasoned that input asset market price changes merit recognition when they occur since they result in cash flow savings or losses that have no necessary dependence on revenue cash flows. The principles proposed in this paper are based on the premise that entities should be accountable for their performance in relation to the opportunities they have for managing input price risks when prices are practicable of faithful representation (see further discussion of accountability considerations under Argument 6 below).

### 3. The cost of inputs sacrificed to achieve revenues

- D10. Argument: The relevant measure of profit achieved by an entity during a reporting period is the difference between revenues realized and the amounts that were paid by the entity for the inputs sacrificed in achieving those revenues. Interim changes in the market prices of input assets do not change the revenues to be achieved by the entity's cash-generation process. Current cost accounting for input assets ignores the actual costs that have been incurred by an entity to achieve revenues and replaces them with irrelevant interim prices that were not incurred by the entity. These current costs, therefore, have no significance (are "imaginary") from the perspective of the reporting entity. In summary, historical cost-based accounting for input assets reports the actual costs of entity operating activities and therefore reflects the actual costs incurred by the entity. Thus historical cost-based accounting provides the most relevant record of the results of entity operating activities that have taken place in a reporting period.
- D11. Response: This argument presumes that the price paid for an input asset locks in the input's cost to generate future revenues. In contrast, under proposed Principle 2, an input's transaction price (for example, the price paid for a market-traded commodity input) establishes the starting point for measuring the effect of the input asset price risk assumed by the entity. It establishes the "price bet" made by the entity. Subsequent to the acquisition date, the current market price measures the current result of this price bet. This current price is not an "imaginary" number with no impact on the reporting entity. It is the price at which the input is currently being exchanged in the market place. This market price represents the input asset's current economic cost (i.e., the price that would have to be paid for the input today). The current market value of the inputs used up in achieving the revenues recognized in a reporting period measures the current economic sacrifice that has been made in achieving those revenues. This, it is reasoned, represents the most relevant record of the results of the operating activities of an entity that have taken place in a reporting period

since inputs sacrificed at their current prices at the times they were sacrificed are matched against revenues recognized at their current prices at the times that they were recognized. In contrast, historical cost-based accounting matches the costs of inputs sacrificed at prices that were incurred at various times in the past, against revenues measured at current prices.

#### 4. Misleading signals and information value for analysis purposes

- D12. Argument: The recognition of a gain resulting from an increase in an input asset's market value signals entity profitability, although it has not increased the ability of the entity to generate future cash inflows. The recognition of this holding gain in one period could be followed in the next period by operating losses when the higher input costs are matched with revenues. Consequently investors may falsely conclude from the first period's reported financial results that the entity is profitable, even though it may report operating losses in the next period. Some argue that this inhibits the ability of users to understand how an entity makes money.
- D13. Response: As pointed out in the discussion of Arguments 1 and 2 above, an input price increase over the transaction price has no necessary implications for future revenues. It simply reflects (1) the saving that results from the entity's astuteness or good luck in acquiring the input asset at less than its current cost, and (2) the current cost of the entity's investment in that input. Financial reports are prepared for users who have a reasonable knowledge and analyze financial reports diligently (see IASB, 2010b: para. QC32). Such users can be presumed to be capable of distinguishing holding gains from operating profits and of understanding their potentially different implications.
- D14. There is important information value in the separation of price change effects from the measure of current operating profit since each has potentially different implications for the future cash-generating ability of an entity. This information should improve rather than inhibit the ability of users to understand how an entity makes money (i.e., by enabling an understanding of the extent to which its reported profits are the result of possibly transitory input asset price changes versus the results of its cash-generating process for transforming the current cost of inputs into revenues).
- D15. If current revenues are not sufficient to recover current input costs, this will be readily apparent from current operating profit. In the extreme circumstance that input asset price increases impair the future ability of the cash-generating process to be profitable, proposed Principle 6 would provide for recognition of an impairment loss.
- D16. It may also be noted that that historical cost-based accounting does not consistently adhere to a principle of non-recognition of input price change effects when they result in current

market value being less than cost. Existing standards and practice have struggled with the application of “lower of cost and market” conventions to input assets.

## 5. Usefulness for financial analysis purposes

- D17. Argument: Prominent recent literature on financial analysis indicates a strong preference for historical cost-based accounting for input assets. This expressed preference has been based on comparing historical cost-based accounting with “fair value” as defined under current IASB and FASB standards. Since these standards define fair value as a current exit value, this expressed preference for historical cost accounting has not been based on comparing it with current market entry prices (the basis of the proposals in this paper).<sup>23</sup>
- D18. Response: Proposed Principle 2 appears to be more consistent with the general financial analysis objective of valuing entities using estimates of sustainable earnings than is historical cost-based accounting. Matching current input costs sacrificed against current revenues seems likely to be a better starting point for estimating an entity’s future sustainable earnings (an entity’s future cash-generating ability) than historical cost-based accounting which matches costs incurred at various past prices against revenues measured at current prices.
- D19. In addition, separate presentation of holding gains and losses on market traded inputs such as the above-noted commodity example, would facilitate analysis of management’s input price management activities. Entities may manage input price risk through the timings and amounts of input acquisitions and/or by employing price hedging strategies using derivatives. In contrast, historical cost accounting obscures the measurement of operating profit by including in it past price change effects. This may be illustrated by an example. Suppose that input assets to be used in a revenue-generating process cost 50 on their acquisition during period 1. Suppose that they are used up in achieving revenue of 80 during period 2 when the current prices of the inputs in the markets in which they were acquired aggregates to 70. On the historical cost basis, the reported operating profit would be 30 (80-50). This 30 is really a gain of 20 resulting from purchasing inputs before their prices increased and a current operating profit of 10 resulting from the transformation of inputs at current prices into current revenues.
- D20. Recent financial analysis literature has tended to reject fair (exit) value for measuring input assets, in large part because current exit prices are considered to anticipate income yet to be

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23 One leading scholar on the use of financial reporting for security analysis has noted that one possible notion of fair value could be “fair value continually applied as an entry value” (Penman, 2007: 34). However, he dismisses this possibility from consideration on the basis that “those issues are not part of the current debate” (Ibid.). See also Hitz, 2007: 344-53. Hitz assumes fair value is an exit price and examines the conceptual merit of its anticipation of future earnings in comparison with historical cost accounting.

achieved by future revenue-generating activities and because historical cost-based accounting is considered to be more objective than fair value measurements of input assets when there are no observable market prices.<sup>24</sup> Proposed Principles 1 and 2 are not susceptible to these problems. In measuring inputs on the basis of input market prices, proposed Principle 2 would not anticipate future earnings activities, and proposed Principle 1 would require that revenues be recognized only when outputs with accessible market exit values have been achieved. Also, proposed Principle 2 would look to current input prices only when they are practicable of faithful representation, so that they would not be less objective than historical cost-based amounts.

## 6. Accountability

- D21. Argument: Management of an entity can be held accountable only for any discrepancy between its plans and the actual costs incurred. This claim may follow from Argument 3 above, that the current prices of inputs are irrelevant and thus should not be expected to be managed. Management's plan is to achieve a profit on the amount paid for an input, and should be accountable only on the basis of its success or failure to do so. Some have claimed that even a purchase of an input at above market value can be justified, if management has a plan under which it expects that future revenues will cover the cost and achieve the profit in management's plan.
- D22. Response: The principles proposed in this paper are based on a broader accountability objective. Under these principles, an entity's operating activities include exposure to input price risk whether or not it is actively managed. The argument that an above market price purchase of an input can be justified on the basis of management's expectations is rejected by this paper because (1) it would anticipate the results of future, yet-to-be achieved revenue generating activities, and (2) it bases financial reporting measurement on private entity expectations rather than achieved market prices (see Appendix section C on comparing current market value with private entity-based measurements).

### **Input assets that depreciate or that are otherwise subject to deterioration**

- D23. The above analysis has focused on input assets such as a market-traded non-perishable commodity that are not subject to deterioration over time. These inputs are subject to price change effects that do not include the effects of deterioration. Changes in the current market value of use assets such as plant and equipment would be affected by both their declining ability to contribute to a cash-generating process and the effects of changes in

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24 Penman argues that "fair value is a minus where firms are involved in (expectational) arbitrage (of input and output) prices in their business model; that is, the business model adds value to market prices" (Ibid.: 39). See also Nissim and Penman, 2008.

the prices the market puts on their remaining cash-flow generating capacity. It may not be practicable to separate these two effects. The information value (relevance) of current market value or current cost pricing for such assets is derived from the fact that current costs sacrificed in the reporting period would be expensed against current revenues, rather than a mixture of past historic costs.

### Summary

- D24. It is proposed that the above analysis comprises a persuasive refutation of the commonly expressed arguments for the superior relevance of historical cost accounting over current cost accounting for input assets. In the end, the ultimate test of proposed Principle 2 rests in its information value for the accepted purposes of financial reporting (i.e., for the purposes of predicting the future cash-generating ability of business entity operating processes, and for holding entity management accountable for management of input price risks when they are practicable of separate faithful representation).

### Practicability of faithful representation

- D25. When the current market value of an input asset is not considered to be practicable of faithful representation, proposed Principle 2 would require that one look for the next most relevant measurement basis that is practicable of faithful representation. This might be an estimate of the current cost to replace an input asset by an independent valuator or by the reporting entity itself. On the other hand, the historical market value basis may be considered to be the most relevant substitute if such a current cost estimate is not considered to be practicable of faithful representation. (See discussion of the practicability of faithfully representing input asset price change effects at paragraphs 84-92 of the paper.) While it is beyond the reasonable scope of a conceptual measurement framework paper to attempt to make these practicability judgments, two implications of proposed Principle 2 are suggested:
- To be in an informed position to implement proposed Principle 2, one must be able to reasonably evaluate current cost and current replacement cost possibilities as possible substitutes when current market value is not practicable of faithful representation. These possibilities have not recently been seriously considered by standard setters. Proposed Principle 2 strongly implies that they be rigorously considered.
  - The practical ability to faithfully represent the current market prices of input assets or current cost substitutes may be expected to improve over time with future developments in markets and market pricing theory and with improved knowledge of and experience with estimation models and techniques.



## E. Financial Assets and Liabilities – Some Comments on the Relevance of Amortized Historical Cost in Comparison with Current Market Value

- E1. Claims for the superiority of amortized historical cost accounting for financial assets and liabilities have recently focused primarily on financial assets and liabilities that have the characteristics of loans that are managed for their contractual yields through their terms to maturity. IASB IFRS 9 (IASB, 2009a) has accepted this position. This paper reasons that the relevance of amortized cost in comparison with current market value should be judged by comparing their measurement properties. The measurement properties of current market value are discussed in section B of this Appendix. This paper accepts that the amortized cost basis has some of the properties of current market value (see analysis at paragraphs 65-70 of the paper) and therefore can be expected to convey some useful information about loan assets and liabilities.<sup>25</sup> However, the paper concludes that historical cost-based accounting for financial assets and liabilities is less relevant than current market value in two fundamental respects:
- Amortized historical cost does not reflect the effects of changes in interest rates (i.e., it does not reflect current prices (interest rate(s)) at which future expected cash flows are discounted to determine their present value); and
  - Amortized historical cost reflects private entity expectations rather than market expectations with respect to the timing, amounts and uncertainties of future cash flows.

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25 Plantin, Sapra and Shin, 2008 examine the trade-offs between historical cost and “marking-to-market” with particular reference to the assets and liabilities of financial institutions. They conclude that marking to market may lead to inefficiencies that may induce suboptimal decisions when assets or liabilities are “long-lived, illiquid or senior” – inefficiencies that they conclude do not exist for historical cost accounting. These inefficiencies may be interpreted within the context of the principles proposed in this paper to be the result of inability in these situations to faithfully represent the essential properties of current market value rather than to the relevance of current market value in comparison with historical cost.

## Interest rate change effects

E2. IFRS 9 takes the position that reflecting the effects of changes in interest rates is not appropriate for certain financial assets meeting certain conditions. Specifically, IFRS 9 (IASB, 2009a: para. 4.1.2) provides that a financial asset shall be measured at amortized cost rather than fair value if both of the following conditions are met:

“(a) The asset is held within a business model whose objective is to hold assets in order to collect contractual cash flows.

(b) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.”<sup>26</sup>

E3. These conditions may serve the purpose of reducing the complexity of the predecessor standard [IAS 39] and of reflecting the current views of many users, preparers and auditors of financial statements, and regulators. But, as explained below, amortized historical cost accounting for these assets has not been, and cannot be, justified to be more relevant than fair value or current market value.

- First, the Basis for Conclusions explaining paragraph 4.1.2 does not provide any conceptual justification for it. Rather, the Basis for Conclusions bases its case primarily on the fact that “almost all respondents to the exposure draft published in 2009 supported the mixed attribute approach” (para. BC4.7). It cites some of the views expressed by some of these respondents that supported its position, but it does not examine the conceptual bases for these views, all of which have been addressed and rejected in studies carried out or commissioned by the IASB and the FASB. (See, in particular, IASC, 1997; FASB, 1999; Financial Instruments Joint Working Group of Standard Setters, 2000; and IASB, 2008c.)<sup>27</sup>

As one example, the Basis for Conclusions observed that some respondents said that fair value does not provide useful information about an entity’s likely actual cash flows “because it assumes that the financial asset is sold or transferred on the measurement date” (para. BC4.7). This claim has been addressed and rejected in, for example, IASC, 1997, chapter 5, paras. 4.35-4.39, and is rejected in the IASB’s recently adopted standard on *Fair Value Measurement*, IFRS 13, which states that: “The IASB con-

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26 However, an exception is provided under which an entity may opt to measure such a financial asset at fair value if conditions specified in para. 4.1.5 are met.

27 See also Hague, 2007; and Linsmeier, 2011.

cluded that an exit price of an asset or liability embodies expectations about the future cash inflows and outflows associated with the asset or liability from the perspective of a market participant that holds the asset or owes the liability at the measurement date” (IASB, 2011a: para, BC39). In any event, this particular criticism would not be applicable to proposed Principle 5 of this paper because that principle would look to prices in the markets in which financial assets are acquired. In addition, any argument for the superior relevance of amortized historical cost for these assets appears to be undermined by the fair value option provided by IFRS 9, paragraph 4.1.5.

- Second, the asserted “business model” objective seems to misconstrue the logical implications of business model theories for businesses that lend money at fixed interest rates. In measuring the effects of changes in the rates of interest demanded in the market place for loan-type assets, current market value enables users to assess the effects of an entity’s interest risk management strategies (or lack thereof). These effects include the income effects resulting from extending fixed rate versus variable rate loans and of matching or mismatching the timing and amounts of such loan asset cash flows with those of its fixed-rate debt and of any interest-rate-risk hedging activities. This information has decision usefulness for investors and other stakeholders regardless of whether loan portfolios are managed on a long-term contractual yield basis. In other words, a lender’s business model should encompass interest rate risk resulting from its lending activities whether or not the lender is managing or says it is managing this risk. (See also the discussion of input price change effects at section D of this Appendix, and the implications of business models for financial reporting measurement at section M.)

## Private entity expectations

- E4. The argument may be made that a business entity could typically be expected to know more about its particular loans and their collectability than other participants in the lending markets and will have more internal information about its own ability to repay its debts than will be publicly available in the market place. Thus, it may be argued, measuring loan assets and liabilities on the basis of private entity expectations should be expected to be more accurate and therefore more relevant than the expectations implicit in market prices. In response, it is acknowledged that an entity may well possess information that others do not have and may have other advantages that may enable it to realize superior returns relative to other market participants. But the more basic question is: When should possibly superior information and other possible reporting entity advantages or disadvantages relative to what is implicit in market prices be recognized? This paper has been reasoned from the premise that the market place is the final arbiter of business entity expectations, and that it follows that the economic impact of possible advantages and disadvantages possessed by an entity should not be anticipated, but should be recognized only as they are

achieved and recognized in market prices. (See discussion of the role of private entity-based measurements at section C of this Appendix.)

## F. Liability Non-Performance (Credit) Risk

- F1. The term “liability non-performance risk” is intended to encompass the credit risk of the debtor in respect of liabilities requiring future cash outflows and the risk that liabilities to provide goods or services will not be fulfilled, both risks to be recognized after taking into account any security that has been provided.
- F2. The role of non-performance risk in liability measurement has been the subject of extensive debate which has given rise to difficult questions on which there is much disagreement. Many dispute the relevance of incorporating non-performance risk in the measurement of liabilities in some or all circumstances. It is, however, well accepted that the current market value of a liability includes non-performance risk. Thus, the question is whether the current market values of liabilities (and any current value substitutes) should be adjusted to remove the effects of non-performance risk, or changes in non-performance risk, in some or all situations. In other words, in incorporating non-performance risk in the measurement of liabilities, does current market value embody a property that is always or sometimes irrelevant for financial reporting measurement purposes?
- F3. The issues have been examined in several publications of the IASB, the FASB, and others.<sup>28</sup> This section reviews the primary issues within the context of the central premises and principles proposed in this paper.

### **The current market value premise applied to liabilities**

- F4. This paper proposes that the most relevant measure of a liability is its current market value, and further that, if the current market value is not practicable of faithful representation, the most relevant substitute that is practicable of faithful representation should be used. This proposal would, therefore, result in the inclusion of non-performance risk in current value measurements, subject to the possibility that some accommodations may have to be made where it is difficult to obtain sufficient information. (See discussion of measurability issues later in this section.)

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<sup>28</sup> The primary sources that are the basis for this section are: FASB, 2000: paras. 78-88; Financial Instruments Joint Working Group of Standard Setters, 2000: paras. 118-21, 370-75, and 4.50-.62; and IASB, 2009b.

- F5. Under the principles proposed in this paper, the current market value of a liability would, with one exception, be determined by the current price in the market in which it was incurred or issued.<sup>29</sup> This current market value represents the amount that the market would currently loan to the entity in return for the entity's promise of future payments of cash, goods or services, taking into account the repayment terms, conditions and uncertainties (risks) of that liability.
- F6. In order to defend the relevance of the current market value measurement for a liability, one must be able to defend the elements of the interest rate<sup>30</sup> that are embodied in that market value. What are the elements of this interest rate, and what do the effects of changes in these elements represent? The current market interest rate includes the current "risk free" rate plus the premium for risks related to possible non-performance<sup>31</sup>, and possible additional factors relating, for example, to a liability's liquidity and information uncertainties. These elements, taken together, comprise the current market interest cost of a liability to the borrower. This current market interest cost represents the rate of interest that must currently be paid in the market for liabilities of equivalent terms and uncertainties.
- F7. If the terms of a liability fix the future cash outflows for of any of these interest rate elements, then a subsequent increase in the market price for this interest rate component will result in reducing the liability's current market value. This reduction in current market value is a gain to the entity. The gain results because the entity has contracted for interest payments at a fixed rate that is less than the rate that the market is currently demanding for such a loan. It has gained because it would have to make higher interest payments in future on this liability if it had not been astute (or lucky) enough to contract for interest payments at a lower fixed rate.
- F8. This may be illustrated by an example. Suppose that an entity obtained a loan at the beginning of year 1 for 1,000 to mature in five years, and that it has contracted to make interest payments at a fixed rate of 5% at the end of each year (that is, 50 per year). Suppose that, at the end of year 1, the market rate of interest for the remaining term of this loan increases to 6%. The entity has gained because it fixed the future annual cash outflows for interest

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29 The exception is a liability that meets the conditions for measurement at lower settlement amounts under proposed Principle 4. The implications for the measurement of non-performance risk under proposed Principle 4 are addressed later in this section.

30 It has been noted earlier that a series of future cash flows will likely be discounted at different rates of interest at any given time to reflect different rates on the yield curve for nearer - versus longer-term cash flows. For the purposes of this section, yield curve effects are ignored and a single interest rate is assumed. This simplification does not affect the essential analysis in this section.

31 In addition to the credit quality of the issuer, non-performance risk is presumed in this paper to include the market credit spread over the risk-free rate required to provide credit to entities of the type (for example, industry) of the reporting entity and the value of collateral or other enhancements.

at 50 rather than 60. The current market value of this loan is 965.34 at the end of year one (the present value at 6% of 50 for each of the next 4 years and 1,000 at the end of year 4). This results in a gain of 34.66 (1,000 – 965.34). In subsequent periods, the entity would record interest expense at the current market rate for this loan (6% in years 2-4 assuming no further changes in interest rates). Conversely, if the market interest rate decreased, the entity will have lost because it has locked in future cash outflows for interest at amounts that exceed what could currently be obtained in the market place.

- F9. These interest rate (price) change effects are the same in substance, with parallel user information benefits, as discussed in section D of the Appendix in respect of input assets. (The entity that holds the above liability as an asset would recognize a loss 34.66 at the end of year 1.)
- F10. This discussion has not differentiated between the elements of the interest rate. In fact, the price (rate) effects are the same regardless of which elements caused them. A gain or loss resulting from a change in the risk-free element of the interest rate is generally accepted to be a relevant market value effect. A change in the non-performance risk premium is justified on the same basis; the entity that locks in the non-performance risk premium on a loan when its credit quality is high is better off in a subsequent period if its credit quality has deteriorated, because it would have had to incur greater cash outlays for interest if it had not fixed the credit risk premium at the lower amount.<sup>32</sup>
- F11. The above discussion has addressed liabilities that would be measured at current prices in the markets in which they were issued or incurred (i.e., on the basis of proposed Principles 3 or 5). Liabilities that meet the conditions of proposed Principle 4 would be measured at current prices in the markets in which they could be settled. Such settlement prices will reflect the non-performance risk of the third party that assumes the obligation, which may differ from that of the reporting entity. In these situations, the settlement price is what it is, including whatever the premium is for non-performance risk. There would not seem to be any basis for disagreement with the inclusion of this premium in measuring the current value at which a liability could be settled under proposed Principle 4.

## Concerns about relevance

- F12. The most common concerns expressed about the relevance of including non-performance risk in the measurement of liabilities are considered below in the context of the premises and principles proposed in this paper.

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<sup>32</sup> Some empirical research has been carried out on this issue, which seems to support the premise that equity markets recognize wealth transfer effects between debt and equity of changes in credit risk (Barth, Hodder and Stubben, 2008).

### Counterintuitive results

- F13. Many object to recording a gain as a result of a decline in credit quality. They argue that reporting a gain from a decline in credit quality is potentially misleading to users and may serve to obscure an entity's deteriorating financial condition. This objection goes to the heart of issue of relevance.
- F14. It seems strange that something bad (the decline in the credit quality of a liability) can result in something that appears to be good (a reduction in the amount of the liability that results in an income gain). But this is the economic result of a fixed non-performance interest risk premium when the risk of non-performance increases. The holder of the loan loses because it has agreed to an interest rate that is currently too low to cover the risk. The debtor has gained because it negotiated the loan before the liability's credit quality declined and thus has obtained a lower borrowing rate than is applicable to the loan today. This is a double-edged sword from the borrowing entity's perspective. On the one hand, the market interest rate increase results in the liability's contracted future cash flows being discounted to a lower present value, resulting in an income gain. On the other hand, the increased future interest rate charge to income will represent the increased future interest burden. Measuring liabilities at their current market value results in the income statement reporting the gain or loss effects of interest rate changes when they occur and reporting interest expense at the current cost of borrowing. In other words, it separates the price (interest rate) change effects from the measurement of ongoing current interest expense. This separation of income effects may be expected to have information value for users in their assessment of the amounts, timing and uncertainty of the future net cash-generating prospects of an entity.
- F15. These conceptual arguments may be most difficult to accept for liabilities of entities that are at significant risk of insolvency. Such entities may have substantial debts, but their current market values may approach zero (depending on the extent to which they may be secured by valuable collateral). So, when asked how much an insolvent entity owes on its liabilities, the current market value answer may be virtually nothing because it cannot repay them. Many may find this to be an unsatisfactory answer. However, the current market values of the liabilities of entities at severe risk of insolvency could presumably be an important input to investors and creditors in assessing their situations and any options that they may have. Certainly, these values would need to be supplemented by adequate disclosures of the contractual or statutory obligations and the current interest rates at which they have been discounted.
- F16. A compelling conceptual response to the claims of counterintuitive effects does not, at least in the short term, resolve the concerns that the balance sheet and income effects will be

confusing to users and could possibly mislead them. The proposed current market value measurement objective could be expected to be confusing and possibly misleading if its effects are not clearly disclosed, and if users do not make the necessary effort to understand them. If current market value is the most relevant measure of liabilities, then its effects should, in time, be understandable and have improved information value for the forward-looking and stewardship purposes of financial reporting. The IASB CFW explanation of the enhancing qualitative characteristic of understandability includes this statement: “Financial reports are prepared for users who have a reasonable knowledge of business and economic activities and who review and analyse the information diligently” (IASB, 2010b; para. QC32).

**Lack of borrower ability to avoid fulfilling its obligations,  
short of ceasing to be a going concern**

- F17. This concern is that including non-performance risk in the measure of a liability seems to portray the liability as though the entity may not fulfill its obligation to repay it. This, it is alleged, is counter to the fact that the entity is contractually obligated to fulfill its obligations.
- F18. The fact that the interest rate includes a premium for non-performance risk does not in any way diminish the obligation of the entity to repay its liability. The premium is simply part of the cost of liability financing. Its inclusion in the interest rate is essential to determine the current value (present value) of the future stream of payments that the entity is obligated to pay. Its exclusion would result in not reporting the full interest cost. An entity may do what it can to reduce this element of the interest cost by pledging security, for example. It may try to borrow over shorter periods or perhaps try to obtain a non-performing risk rate premium that varies with its credit rating if it believes that its credit quality will improve. But, in the end, the premium for non-performing risk is an integral part of the interest rate cost to the entity of fulfilling its liability obligations.

**Asset-liability mismatch**

- F19. The concern here is that including changes in non-performance risk in the measurement of liabilities is likely to increase the mismatch between assets and liabilities. An increase in the non-performance risk element of an entity’s liabilities is usually accompanied by a decline in the value of an entity’s assets. However, much of the decline in asset value may not be recognized in financial statements because significant intangible assets (including internally generated goodwill) are not recognized, and some assets may not be measured at current values.

F20. This concern may be addressed in two steps: first, asset recognition and measurement, and, then, liability measurement:

- In accordance with the principles proposed in this paper, value that is yet to be created by an entity's cash-generating process would not be recognized; thus the recognition of intangibles that are not acquired as inputs to an entity's cash-generating process activities is precluded. Recognized assets would be measured on the basis of current prices in the markets in which they were acquired or on the basis of best substitutes for such prices. In addition, proposed Principle 6 would recognize impairment at the level of the cash-generating unit of account. It is proposed then that the balance sheet would report the assets that merit recognition on the basis of sound economic principles, and that these assets would be measured at relevant current market values or on the basis of the most relevant substitutes that are practicable of faithful representation. Thus, a mismatching concern could not be attributed to any fault with asset recognition or measurement under the principles proposed in this paper.
- Turning to liabilities, the current market value measurement of a liability's non-performance risk would presumably factor in both the perceived security provided by existing assets and expectations with respect to the entity's future cash-generating ability. Thus, the market can be expected to look beyond existing assets. There is no mismatching between assets and liabilities, because, under the principles proposed in this paper, assets would appropriately exclude future earnings prospects. A decline in the market value of a liability that is attributable to an increase in the risk of non-performance may, therefore, be the result of a decline in the value of existing assets (which would be recognized in accordance with the principles proposed in this paper) or a decline in the entity's expected future cash-generating prospects.

F21. Mismatching between assets and liabilities would result if the non-performance risk is not included in the measurement of liabilities, but is included in their measurement as assets held by lenders.<sup>33</sup>

### **Realization of benefit**

F22. The concern is that an entity generally does not have the ability to benefit from gains from measuring liabilities at current values, because the entity will not normally be able to settle the liability by repurchasing it or transferring it to a third party.

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<sup>33</sup> This is illustrated in IASB, 2009b: paras. 42-5.

F23. It may first be noted that this concern is not restricted to non-performance risk; it relates to any change in the current value of a liability, including the effect of a change in the basic risk-free rate. Second, this concern presumes that realization requires the ability to currently settle the liability. This would then be an exit value to the entity. This paper, on the other hand, would measure liabilities on the basis of prices with counterparties in the markets in which the liabilities were issued or incurred. Realization in these markets would be presumed to take place over time as the liabilities are fulfilled with the counterparties. This paper thus reasons that realization of a gain on a liability as a result of an interest rate increase will usually take place over the liability's term to maturity as a result of fixed future cash flows for interest being less than they would be at current interest rates.

### Summary

F24. The above analysis indicates that there are reasonable conceptual responses to the commonly expressed concerns about the relevance of recording gains as a result of decreases in the credit quality of liabilities. The conceptual case may be most open to criticism in respect of liabilities of entities that are at severe risk of insolvency. Additional consideration of these situations and how they may be presented would seem to be warranted.

### Concerns about measurability (practicability of faithful representation)

F25. Estimating the non-performance risk element of a liability is subject to major measurability issues when there is a lack of observable market evidence. In particular, the following issues relating to the information bases for estimates of non-performance risk premiums need to be addressed:

- An entity's management may have private information that could affect its credit standing if it became known to external financial statement users. It may be reasoned that management should not use such information to adjust an observable, reasonably efficient market price.<sup>34</sup> However, if a liability's current market price is not observable, an entity may not be able to determine what market participants could be expected to know if there was a market for the liability.<sup>35</sup>

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34 This is the conclusion of the Financial Instruments Joint Working Group of Standard Setters, 2000: para. 121, provided that the information is not required to be disclosed by financial reporting standards or securities or other statutory legislation or regulation.

35 The Financial Instruments Joint Working Group of Standard Setters concluded that an entity would use "all information that the enterprise would be legally obligated to disclose if the liability were traded, as well as that which market participants would reasonably be expected to discover for themselves" (Ibid.).

- There is a potentially troubling circularity in private entity estimates of non-performance risk, because such estimates can be expected to be affected by the entity's reported financial results, which in turn, will be affected by the changes in this risk component of interest rates. An entity's estimate of non-performance risk may be interpreted by users to be conveying information about management's expectations for the future prospects of the entity.
- F26. The practical ability to make these estimates was addressed by the Financial Instruments Joint Working Group of Standard Setters (2000: paras. 370-2). It suggested that an entity assume that the credit risk component of an interest rate equals the interest rate spread over the basic risk-free rate when the liability was issued or incurred, and that that this spread has not changed in subsequent periods unless certain available information indicates otherwise.<sup>36</sup> It listed events that could indicate that a change has taken place. It is to be noted that the need to estimate non-performance risk components of interest rates and changes therein applies equally to the measurement of debt-type instruments held as assets. Thus, if reasonable estimates can be made for loans held as assets, they will also apply to these same loans as liabilities.

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<sup>36</sup> The IASB accepted this basis of determination in its requirements for disclosure of the change in the fair value of a financial liability that is attributable to its credit risk (IASB, 2006: paras. 10(a) and B4).

## G. Some Considerations with Respect to Revenue Recognition

- G1. Principles 1 and 4 propose the underpinnings for a conceptual framework for revenue recognition. It is not, however, the purpose of this paper to address the many and varied issues of revenue recognition. Rather, its purpose is to establish the dependence of revenue recognition on measurement and to propose that current market value, as defined, is the relevant measurement basis for the recognition of revenue.
- G2. Proposed Principles 1 and 4 bear a strong resemblance to the fundamental conditions that have long been generally accepted to be the basis for revenue recognition. For example, FASB Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*, (1984) concluded that:
- “... recognition involves consideration of two factors, (a) being realized or realizable, and (b) being earned, with sometimes one and sometimes the other being the more important consideration.”
  - “Revenues and gains generally are not recognized until realized or realizable. ... Revenues and gains are realizable when related assets received or held are readily convertible to known amounts of cash or claims to cash. Readily convertible assets have (i) interchangeable (fungible) units and (ii) quoted prices available in an active market that can rapidly absorb the quantity held by the entity without significantly affecting the price.”
  - “... revenues are considered to have been earned when the entity has substantially accomplished what it must do to be entitled to the benefits represented by the revenues.” (para. 83)
- G3. Although there are marked similarities between these conditions and those proposed in Principles 1 and 4, there are some differences. For example, under proposed Principle 1, the “realized or realizable” condition would be met by the creation of an output for which market value is practicable of faithful representation. The FASB Concepts Statement seemed to have in mind a concept of “market value” (“quoted prices available in an active market that can rapidly absorb the quantity held by the entity”) that is similar to a reasonably efficient market value. However, the FASB Concepts Statement seemed to provide for realization as an alternative to realizable and would also require “interchangeable units”. Further,

the two conditions of proposed Principles 1 and 4 would both have to be met rather than “sometimes one and sometimes the other being the more important consideration”.

G4. A wide range of revenue recognition approaches have been advocated in financial reporting literature.

- A revised IASB Exposure Draft, *Revenue from Contracts with Customers* (Revised ED) (IASB, 2011b), issued jointly with the FASB, has proposed the following principle:

“An entity shall recognise revenue when (or as) the entity satisfies a performance obligation by transferring a promised good or service (i.e., an asset) to a customer. An asset is transferred when (or as) the customer obtains control of that asset.” (para. 31)<sup>37</sup>

Proposed Principles 1 and 4 visualize a broader basis for recognition, in particular when a good or service generated in advance of fulfilling a customer contract has an accessible market value that is practicable of faithful representation.

- Toward the other end of the range of possibilities, some may argue that obtaining the contract with the customer is a critical value-creating achievement in many cash-generating processes that should be recognized. Under the principles proposed in this paper, the portion of the total revenue to be received from a customer that is attributable to obtaining the contract would be recognized when the contract is obtained, *if* the market value for this portion is practicable of faithful representation. This market value measurability condition may not often be met, but the discussion under proposed Principle 4 notes some possibilities (including, perhaps, some warranty sales contracts).
- Some standards provide for the recognition of revenue when a saleable good is produced (for example, certain agricultural products) or as a good is constructed. The conditions proposed in Principles 1 and 4 could conceivably be met for such goods in some situations.

G5. The Revised ED issued jointly by the IASB and FASB in November 2011 (IASB, 2011b) differs in some significant respects from the principles proposed in this paper. The following appear to be the more fundamental of these differences:

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<sup>37</sup> However, the Revised ED “... does not address revenue arising from other transactions or activities (for example, revenues arising from changes in the value of some biological or agricultural assets)” (IASB, 2011b: para. 2). Thus, revenue that does not arise from a contract with a customer in accordance, for example, with other standards, would not be affected by the proposed provisions of the Revised ED (para. BC29).

- a) As observed above, the core principle of the Revised ED is that an entity recognize revenue when (or as) it satisfies a contractual obligation to transfer the control of a good or service to a customer. This paper proposes a broader principle based on the achievement of an accessible market value, as defined, for a generated good or service.

The Revised ED's Basis for Conclusions discussed the possibility (advocated by some respondents to its proposals) of developing an "activities model" under which revenue would be recognized as an entity produced goods or provided services (Ibid.: paras. BC23-BC25). The Basis for Conclusions discussion of the reasons for rejecting this possibility gave no indication whether the boards considered basing an activities model on the achievement of outputs with accessible current market values, as is proposed in this paper.

- b) The Revised ED would not remeasure non onerous performance obligations at the current prices of the underlying contracts in the markets with customers, whereas proposed Principle 3 would do so when such prices are practicable of faithful representation. The Revised ED Basis for Conclusions summarized the boards' consideration of this issue as follows:

"The boards considered, but rejected, an alternative measurement approach, which would have been to measure the remaining performance obligations directly at each reporting date. The boards observed that this alternative would make accounting for the contract more complex. In addition, the boards expected that it would provide little additional information to users of financial statements in many cases, either because the values of goods or services promised are not inherently volatile or because the effect of any volatility that might exist is limited because an entity transfers the goods or services to the customer over a relatively short time." (Ibid.: para. BC125)

These reasons reflect the boards' judgments of practicability, including their expectations with respect to volatility and assessments of information value cost-benefit trade-offs. The above explanations of the boards' considerations did not challenge the principle of remeasurement, but neither did they indicate that the boards accepted the principle. If the boards' rejection of re-measurement was based solely on grounds of practicability, then it would not be inconsistent with proposed Principle 3 which would re-measure at current prices only when such re-measurement is practicable of faithful representation.

- c) The Revised ED would require that, in determining the transaction price of a good or service, an entity would adjust the amount of consideration to reflect the time value of

money if the contract has a significant financing component (Ibid.: para. 58). At the contract's inception, the discount rate would be the rate that would be reflected in a separate financing transaction between the entity and the customer (Ibid.: para. 61). This is consistent with the principles proposed in this paper. However, the Revised ED would require that the entity not update this discount rate for subsequent changes in circumstances or interest rates (Ibid.: paras. 61 and BC155). This may follow from the Revised ED's position of not remeasuring non-onerous performance obligations, but it is not consistent with the principles proposed in this paper. Proposed Principles 3 and 5 would require updating the discount rate to reflect current market interest rate conditions, except if, for some reason, the current rate is not practicable of faithful representation.

- d) The Revised ED rejected measuring performance obligations at their exit prices which would be the prices at which an entity could settle performance liabilities with third parties (Ibid.: para. BC26). Proposed Principle 4 of this paper sets out conditions under which operating liabilities, including customer performance obligations, would be measured at their current exit prices. The conditions proposed in Principle 4 are fundamentally consistent with the IASB Exposure Draft to amend IAS 37 (IASB, 2010a), although the IAS 37 Exposure Draft would scope out revenue recognition.
- e) The Revised ED would re-measure a performance obligation that it considered to be "onerous" at the lower of the entity's expected cost to fulfill it or the amount that the entity would have to pay to exit the obligation (Ibid.: para. 87). Measurement at the entity's expected cost to fulfill an onerous performance obligation would result in excluding any provision for lost profit margin. An earlier IASB Discussion Paper expressing the boards' preliminary views acknowledged that, in theory, the measurement of an onerous performance obligation should include a profit margin, and that its measurement at the entity's expected cost is inconsistent with the measurement of other liability provisions. But, "the boards think that such an approach would be unnecessarily complex for most contracts with customers" (IASB 2008d: para. 5.72). The Revised ED contained this explanation:

"The rationale for including a margin would be that a profit-oriented entity does not typically promise to transfer a good or service to a customer without a margin. However, the boards noted that including a margin in the remeasurement would be a significant change to the requirements for loss-making contracts in existing standards ... and would increase the complexity of measuring onerous performance obligations, particularly when observable prices do not exist. Furthermore, some think that it would be counter-intuitive for an entity

to recognize a profit when it satisfies a performance obligation.” (IASB, 2011b: para. BC215)

Decreasing the amount of a performance obligation by excluding the profit margin that would be demanded in an arm’s length transaction to fulfill that obligation would result in effectively recognizing a gain (in the form of a reduced loss provision) equal to the amount of the profit that would be expected to be achieved by the future operating processes to generate the goods or services necessary to fulfill the obligation. The exclusion of the profit margin from the measurement of an onerous obligation is inconsistent with the principles proposed in this paper, which are based on the premise that the measurement of operating assets and liabilities should not anticipate value that has yet to be achieved by the revenue-generating processes of the reporting entity. The Revised ED position is inconsistent with the IASB Exposure Draft, *Measurement of Liabilities in IAS 37*, which would require that an estimate of an obligation to be fulfilled by undertaking a service be measured at the market price a contractor would charge or, if there is not a market for this service, “[t]he estimates shall include the costs the entity expects to incur and the margin it would require to undertake the service” (IASB, 2010a: para. B8). However, the IAS 37 proposals would exempt performance obligations to customers from this requirement, pending further study.

- f) The Revised ED would require that an entity exclude the effects of customer credit risk (collectability) when determining the transaction price (revenue) of a good or service sold in exchange for a receivable. Upon initial recognition of the receivable, any difference between this measure of revenue and the amount of the receivable (which would be discounted for customer credit risk) would be presented as a separate line item adjacent to the revenue line in the entity’s statement of income (Ibid.: paras. 68-69, BC167 and BC171-BC173). Under proposed Principle 1, revenue would be measured at the current market (cash-equivalent) value of the receivable which would incorporate the customer’s credit risk.

The Revised ED does not specify a minimum threshold for uncertainty of collectability of the consideration exchanged for a good or service, no matter how uncertain collection may be (Ibid.: paras. BC168-BC170).<sup>38</sup> In contrast, under proposed Principle 1, the recognition of revenue would require that consideration exchanged for a good or service have an accessible current market value that is practicable of faithful representation. A receivable that is highly uncertain of collection may not meet this condition.

38 The Revised ED expressed the view that concerns about collectability would be addressed by requiring that contracts with customers have “commercial substance” (as discussed in Ibid.: para. BC34) and that impairment losses be presented as a line item adjacent to revenue in the income statement (Ibid.: para. BC169).

The Revised ED constrains recognition of the cumulative amount of variable revenue to the amount that the entity is “reasonably assured” to be “entitled” to (without consideration of credit quality) (Ibid.: paras. 81-85 and BC198-BC203). Under proposed Principle 1, a current market value measurability condition would have to be met for the recognition of all forms of revenue.

- g) The Revised ED distinguished “service-type” warranties, which (consistent with proposed Principle 3) would be accounted for as separate performance obligations to customers, from “assurance-type” warranties. Assurance-type warranties provide assurance that the entity’s products are free from defects at the time of sale. The Revised ED would treat them as liabilities for estimated future costs to replace or repair defective products and would measure them at their estimated exit values (Ibid.: paras B10-B13). This would result in an entity recognizing revenue and therefore profit margin on products that are expected to be defective. Proposed Principle 1 of this paper would not permit revenue to be recognized on products that are expected to require future repair or replacement since the conditions necessary to achieve revenue will not have been met. This may not be a difference of principle, however, because the Basis for Conclusions explained that Revised ED position was adopted “mainly for ... practical reasons” (Ibid.: paras. BC289-BC291).

## H. Current Market Value Compared to Fair Value

H1. This section attempts to identify the principal areas of difference between the concept of current market value and the principles for its application proposed in this paper and the standards for the definition, measurement and disclosure of “fair value” put in place by the IASB in IFRS 13, *Fair Value Measurement* (IASB, 2011a). IFRS 13 was issued in May 2011 and is to be applied for annual periods beginning on or after January 1, 2013. IFRS 13 is the result of the efforts of the IASB and FASB to develop common requirements for measuring fair value and for disclosing information about fair value measurements. The basic provisions of IFRS 13 and existing FASB requirements are the same.

### The definition of fair value

- H2. “This IFRS defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” (Ibid.: para. 9)
- H3. One must understand the detailed provisions of IFRS 13 to fully understand this definition and its measurement implications. An in-depth comparative analysis should be carried out, but this section focuses only on identifying what appear to be the broad areas of difference.

### Areas of difference

- H4. There appear to be three basic areas of difference that are relevant to the proposals of this paper:
- Fair value, as embodied in the provisions of IFRS 13, encompasses a broader range of current values than the paper concludes could be substantiated to faithfully represent current market value.
  - The principles proposed in this paper address when an entity should measure its assets and liabilities at current market values, and when they should be measured using other (substitute) measurement bases. IFRS 13 only addresses how fair value should be measured when other standards require or permit assets or liabilities to be measured at fair value.

- IFRS 13 defines fair value as an exit price, while this paper proposes that current market value should be measured at current prices in the markets in which assets and liabilities would be acquired, issued or incurred until conditions are met for the recognition and measurement of current market value generated by cash-generating processes.

### **Current market value versus the fair value hierarchy**

H5. IFRS 13 looks first to quoted prices in open and active markets. Such prices seem to be the equivalent of prices in reasonably efficient markets. However, IFRS 13 does not restrict fair value estimates to prices that can be reasonably substantiated to faithfully represent<sup>39</sup> open and active market prices. This is most evident in Level 3 of the “fair value hierarchy”, which requires that: “Unobservable inputs shall be used to measure fair value to the extent that relevant observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date” (para. 87). IFRS 13 goes on to provide that:

“In developing unobservable inputs, an entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the entity that is not available to other market participants (e.g. an entity-specific synergy). An entity need not undertake exhaustive efforts to obtain information about market participant assumptions. However, an entity shall take into account all information about market participant assumptions that is reasonably available.” (para. 89).

H6. This paper concludes that Level 3 estimates of fair value cannot purport to faithfully represent current market value. The guidance and examples supporting the application of Level 3 estimates in IFRS 13 may be read to imply that an acceptable fair value estimate for financial reporting purposes can always be made because, if all else fails (there is no relevant observable market evidence), a reporting entity is to fall back on its own private expectations. There seems, in other words, to be no representational faithfulness threshold for Level 3 fair value estimates. One must, then, look to other standards to permit or require fair value measurement only for assets and liabilities for which fair value is practicable of faithful representation. Whether fair value is practicable of faithful representation is, therefore, left to be judged on an issue-by-issue basis in other standards, and no coherent basis for making these judgments is evident from existing standards. A review of recent accounting literature indicates that the ability of Level 3 estimates to faithfully (reliably)

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<sup>39</sup> It may be remembered that this paper interprets the fundamental qualitative characteristic of faithful representation differently from its apparent definition in the IASB *Conceptual Framework*. See paragraph 40 of the paper and discussion in section A of this Appendix.

represent fair value is a major source of concern. (See, for example, Hitz, 2007: 342-4; Landsman, 2007; Wilson, 2007: 203-8; O'Brien, 2009; and American Accounting Association's Financial Accounting Standards Committee, 2010.)

- H7. The principles proposed in this paper are based on the presumption that there are limits to the practicability to faithfully represent current market value that should be explicitly recognized. This paper reasons from this presumption that the practicability to faithfully represent current market value has major consequences for the recognition of value created by cash-generating processes (proposed Principles 1 and 4), and for the selection of substitutes for measuring assets and liabilities when current market value is not practicable of faithful representation (proposed Principles 2, 3, 5 and 6).
- H8. Thus, fair value comprises a much broader range of possible current value estimates than this paper proposes could be justified to faithfully represent current market value. However, the fair value measurement objective appears to have much in common with the measurement objective of this paper, which is to represent as nearly as is practicable the properties of open and active market prices. Thus, Level 3 fair value estimates could qualify as appropriate substitute measurements for some assets and liabilities under the principles proposed in this paper, subject to meeting reasonable measurability conditions and subject to the implications of the exit versus entry definitional differences discussed below. The disclosures required by IFRS 13 go a considerable way toward distinguishing between the three levels of its fair value "hierarchy" of descending reliability. This paper would extend these disclosures to require a clear distinction between current market value and substitute measurements and to require that substitutes for current market value be described in terms of what they can purport to represent and in terms of their limitations in relation to the current market value ideal.

#### **The connection between when and how market-based values should be measured for financial reporting purposes**

- H9. As noted above, IFRS 13 avoids specifying when an entity should measure an asset or liability at fair value. It leaves those decisions to individual standards. This paper is based on the premise that there is a fundamental link between recognition and measurement, between how current market-based values should be defined and measured and when they are appropriately recognized for financial reporting purposes. In particular, proposed Principle 1 provides an output market value condition for the recognition of value created by a business entity's cash-generating processes.

### Exit and entry price issues

- H10. The above IFRS 13 definition specifies that fair value is an exit price. This differs from the proposed principles of this paper under which input assets (proposed Principle 2), operating liabilities (proposed Principle 3), and investing assets and liabilities (proposed Principle 5) would be measured on the basis of prices in the markets in which they would be acquired (assets) or issued or incurred (liabilities). This difference would not result in different measurements (i.e., in different numbers) for assets (liabilities) that would be sold (transferred) by the entity in the same markets in which it would acquire (issue or incur) them. This may be the case for most investing and financing assets and liabilities. But the difference would seem to have significant implications for the measurement of operating assets and liabilities.<sup>40</sup>
- H11. A number of accounting academics and others have expressed strong objections to what they perceive to be an increasing acceptance of fair value (as defined in IFRS 13) in a widening array of accounting standards. A primary basis for this concern is the belief that fair (exit) value measurements of operating assets and liabilities anticipate estimated future, yet-to-be achieved business entity earnings activities, rather than measuring the results of activities that have taken place. (See, for example, Penman, 2007; Whittington, 2008; Bezold, 2009; Biondi, 2011; and Penman, 2011: ch. 8.) The application of the IASB and FASB exit value definition of fair value to non-financial (input) assets seems to be vulnerable to this criticism. However, the exit value of an input (use) asset is to be determined under IFRS 13 on the basis of the asset's hypothetical sale to a market participant that has complementary assets for its use in a revenue-generating process, which may effectively put the asset in an input context. (See IASB, 2011a: paras. 27-32 and B3.) Nevertheless, questions remain as to whether such fair value determinations could anticipate future earnings activities with respect, for example, to self-constructed input assets. In particular, the provisions of IFRS 13 for measuring the fair value of a non-financial asset in its "highest and best use" (paras. 27-31) seem to have potential for recognition of income before such an input asset contributes to a revenue-generating process.
- H12. Under proposed Principle 2, input assets would not anticipate the results of future cash-generating activities because they would be measured on the basis the prices of inputs in the markets in which they would be acquired by the reporting entity. The proposed principles of this paper seem to offer a more straightforward, less ambiguous approach to the measurement of input assets by reason of their direct reference to markets in which input assets would be acquired rather than on the basis of artificial, hypothetical sales to market participants with complementary assets.

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40 Barton, 2000 assesses the complementarity of current exit and entry price-based accounting.

# I. Information Asymmetry and New and Used Car Markets

- I1. There would seem to be serious discontinuities between the market prices of new and used cars (and quite possibly of many other similar products). The current market value of a new car typically appears to drop significantly immediately after it is acquired. It is then considered to be a used car that is traded in the used car market. Thus, an entity acquiring a new car in the new car market on day one would seem to have incurred a loss on day two, given the car's reduced market value in the used car market (the market in which a car of its now used status would be acquired).
- I2. A major source of this difference may be information asymmetry. Information asymmetry exists when some market participants have or are believed to have information about the value-affecting properties of an asset or liability that is not available to other market participants. In the case of almost-new cars, potential buyers may believe that such cars may be on the market only if the seller has knowledge of problems with them that are not publicly visible (i.e., that such cars may be “lemons”).<sup>41</sup>
- I3. Market participants who may be perceived to have information advantages can be expected to try to reduce information asymmetry in order to obtain better market prices. For example, a seller may provide warranties to try to provide greater confidence in the quality of its product. Financial market regulators enforce fair trading rules and requirements for timely full and fair disclosure to try to reduce information asymmetry and thereby improve the efficiency of securities markets. But, despite these efforts, some degree of information asymmetry may exist even in open, active and well-regulated markets for many assets and liabilities. A modest degree of information asymmetry may not threaten reasonable market efficiency. Some may even argue that some information asymmetry may be accepted to be a meaningful element of open and active used car market prices reflecting uncertainties about the quality of used cars. But a large immediate new-to-used asset market price discount seems not to reflect a decision-useful financial reporting result, whether it is due to information asymmetry or some other cause.
- I4. If information asymmetry or other factors cause significant discontinuities between new and used asset market prices, it might be reasoned that used market prices do not faithfully represent the properties of assets acquired by entities in new asset markets. If this is determined to be the case, then proposed Principle 2 would require looking to the most rel-

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41 Information asymmetry in the market for used cars is not a new issue. (See Akerlof, 1970.)

evant substitute that is practicable of faithful representation. It is understood that for some entities in some jurisdictions (for example for public sector entities in Australia) it has been common practice to measure such used assets at current market prices for new assets less a provision for depreciation for the estimated service potential used in the reporting period.

15. Information asymmetry issues are not restricted to new versus used vehicle markets. They can arise in financial markets, as evidenced by the financial markets crisis of 2008-2009. Lacking reasonably efficient observable market prices, one may look to pricing models. At present, such models seem to ignore information asymmetry, that is, they implicitly assume that all participants have access to the same information and that no participants have information advantages. In other words, pricing models appear to assume greater efficiency than may exist in actual observable open and active market prices. It might be doubted whether information asymmetry could be faithfully represented in asset or liability pricing models.
16. In summary, the apparent new-to-used market price discontinuity (and information asymmetry generally) present difficult questions. Proposed Principle 2 provides that input assets should be measured at current prices in the markets in which the inputs would be acquired when these prices are practicable of faithful representation. The question, then, is whether or when current used asset market prices should be accepted to faithfully represent the current input market value of assets that have been acquired in new asset markets. If the faithful representation condition is not met, then the question becomes one of selecting the most relevant measurement that is practicable of faithful representation. These are questions related to the application of proposed Principle 2 that require further study and deliberation by accounting standard setters. Such study should include research on actual new-to-used asset price discounts and their causes.

## J. An Analysis of Historical Market Value Accounting for Depreciable Input Assets

J1. Proposed Principle 2 would have significant implications for the role of historical cost-based accounting for input assets. The primary implications proposed in the paper may be summarized as follows:

- Traditional historical cost-based accounting has a different measurement objective from that of proposed Principle 2. The paper proposes that the traditional historical cost objective for the measurement of an input asset on its initial recognition be modified to be consistent with proposed Principle 2. The objective would be to measure inputs at their market values on initial recognition. Subsequent accounting for input assets would then be based on historical market values. As a practical matter, it would seem reasonable to assume that transaction prices paid for input assets (excluding transaction costs) equal their market prices at transaction dates unless there is clear evidence otherwise.
- Historical market value-based accounting for input assets provides a more limited representation than the current market value ideal proposed in Principle 2. In particular, historical market value-based accounting does not measure input asset price change effects (except in certain impairment situations). In consequence, the role of historical market-value based accounting for input assets would be as a possible substitute for the current market value ideal when current market value is not practicable of faithful representation. Its merits as a substitute would be judged in comparison with the evaluated relevance and practicability of faithful representation of other possible measurement bases, including current cost-based measurements. (See section K of this Appendix.)
- Despite its limitations, it is well established and accepted that historical cost/historical market value-based accounting for input assets can provide a decision-useful measure of the economic sacrifices made to achieve revenues and of input assets' remaining capacities to contribute to the generation of future revenues. Historical market value-based accounting for input assets does, therefore, have a claim to relevance and representational faithfulness as a possible substitute for the current market value ideal.

- J2. The following is a discussion of the properties that could be embodied in historical market value-based accounting for depreciable input assets. This discussion reflects the premise that, when viewed as a possible substitute for the current market value ideal, historical market value-based accounting should be applied as nearly as its limitations allow with the measurement properties of current market value.
- J3. Depreciation accounting has received little attention since the 1940s and, for the most part, seems to be a rather perfunctory exercise of mechanically applying traditional depreciation methods with no recognition given to the time value of money. The time value of money principle is well recognized and incorporated in the measurement of inputs that represent obligations to make expenditures over future periods (for example, pension and asset retirement obligations). The time value of money principle applies equally to expenditures made to acquire inputs in advance of expected future economic benefits.
- J4. The market value on acquisition of an input asset that is expected to have a multi-period useful life may be envisaged conceptually as a stream of future economic benefits (ultimately cash flows) expected to be contributed by its use over its expected life discounted at the market rate of return at that time for assets of commensurate term and risk. Depreciation may then be envisaged as the decline over the asset's useful life in the historical market value of the asset's stream of expected future cash flow contributions.
- J5. The problem is that this stream of expected future cash flow contributions cannot be observed either on acquisition or in subsequent periods. It has been well established that it is impossible to determine, even after the fact, how much an individual input has contributed to revenues achieved during a period. All that can be said unequivocally is that revenue recognized in a period is the result of the interaction of all the inputs to that revenue-generating process.<sup>42</sup>
- J6. However, an estimate of the future cash flow stream that is implicit in the market value of an input asset at its acquisition date can be derived from estimates of its useful life, residual value, pattern of decline in its value over its expected useful life (its depreciation pattern) and the per-period rate of return demanded in the market place at the time of acquisition for assets of commensurate term and risk. This may be illustrated by an example. Suppose that equipment is acquired for its market value of 10,000 at time 0, and that it is expected have a useful life of three years with no residual value, and that it is expected to decline in value (depreciate) on an even (straight-line) basis over its useful life. Assuming that the market rate of return for assets of this term and risk was 10% at time 0 would imply the following stream of expected future cash flow contributions by the asset:

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42 A definitive analysis of the problems of arbitrariness is contained in Thomas, 1969 and 1974.

	Year 1	Year 2	Year 3	Total
Depreciation	3,333	3,333	3,334	10,000
Expected return:				
Year 1 (10% × 10,000)	1,000			
Year 2 (10% × 6,667)		667		
Year 3 (10% × 3,334)			333	
Expected Cash-flow contribution	4,333	4,000	3,667	

- J7. Depreciation: The presumption is that the input asset value expected to be sacrificed in a period will be compensated for by revenues in that period. Depreciation, then, is the expected return *of* capital (market value) invested. The expected decline in the historical market value of a use asset over its expected useful life may be approximated by estimating its depreciation pattern based on realistic expectations with respect to physical deterioration and technological obsolescence.
- J8. Expected return: The market value of an asset embodies an expected rate of return, which is the rate at which future expected cash flows are discounted. The rate of return implicit in the historical market value of an input use asset is the market rate of return for assets of commensurate term and risk at the time the asset was acquired. This rate multiplied by the expected remaining carrying value of the asset during the period represents the expected return *on* capital invested. [The above example simplified the calculation by assuming the full return would be earned at the beginning of the period (at 10% of the expected carrying value at the beginning of each period). A more realistic assumption could have been made with some addition to the complexity of the calculation.]
- J9. Expected cash flow contribution: The sum of the expected return *of* investment (depreciation) and the expected return *on* investment in each period equals the asset's expected cash flow contribution in that period. The present value at time 0 of these expected contributions (4,333, 4,000 and 3,667) discounted at 10% per period is 10,000, which is its market value on acquisition. Note that the straight-line pattern of depreciation yields a declining pattern of expected cash-flow contribution benefits, on the expectation of a constant rate of return (equal to the market rate at the time of investment).<sup>43</sup> Basing depreciation on the

43 A different rate of return for each period may be required to reflect the term structure ("yield curve") of interest rates existing at the date an asset is acquired. Appropriately reflecting the term structure of interest rates is subject to some questions, however. (See Financial Instruments Joint Working Group of Standard Setters, IASB, 2000, paras. 6.65-6.71.)

assumption of a constant return on investment is more realistic than assuming a constant return on revenue, which may be the general assumption underlying conventional historical cost depreciation. Some interest-adjusted depreciation methods do exist, however, for example, the “sinking fund” method (which assumes that the cash flow contribution will be level throughout the asset’s useful life), but this method has generally been rejected by standard setters and securities regulators.<sup>44</sup>

- J10. The estimation of future cash flows implicit in the historical market value of a depreciable input asset is only as good as the estimates of the parameters on which it is based. Estimates of useful life, residual value, and depreciation pattern will reflect the expectations of the reporting entity. Nevertheless, if they are rigorously and rationally estimated, they will be grounded in observable or estimable information about the asset and how it will be used and maintained. An asset’s useful life and residual value are actual outcomes that should be capable of rational estimation. The depreciation pattern is also an estimate (not a policy choice) reflecting expectations of the pattern of period-to-period physical and technological deterioration. In most developed economies, the current market risk-free rate of interest appropriate to the expected term of an asset can be determined from government bond prices, but the risk premiums appropriate to various use assets are likely to be subject to considerable ranges of uncertainty. All told, estimates of the cash flow contributions implicit in the market values of use assets are subject to considerable uncertainty, but they are not arbitrary if based on the observable economic properties of the assets and estimates of future outcomes.<sup>45</sup>
- J11. In subsequent periods, depreciation of the historical market value would be based on these estimates of useful life, residual value and depreciation pattern — as under historical cost accounting. This depreciation should be adjusted in subsequent periods if there is evidence of significant changes in the expected capacity of an asset to contribute to future cash flow generation. Adjustments could result from changes in remaining expected useful life, residual value, and/or depreciation pattern. Adjustments should be recorded on a “catch-up” basis, so that the adjusted carrying value of the asset continues to implicitly represent the present value of expected remaining future cash flow contributions discounted at the rate of return implicit in the asset’s historical market value.<sup>46</sup>
- J12. In summary, historical market value-based depreciation accounting for use assets can, if reasonably applied, be a practicable, decision-useful substitute for current market value

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44 For analysis and examples of time adjusted depreciation patterns see Skinner and Milburn, 2001: ch. 11.

45 See Staubus, 1986: 128-9 for a discussion of his proposals for distinguishing arbitrary allocations from allocations that may be considered to be “market simulation techniques”.

46 See discussion of this point at FASB, 2000, paras. 97-100.

when continuous current value measurement is not practicable of faithful representation — on the basis that such depreciation reflects realistic estimates of the major factors affecting the decline in the historical market value of a use asset over its useful life. In so doing, depreciated historical market value can claim to represent some significant properties of the ideal. It provides a limited representation, however, because it is an allocation of historical market value, not a measurement. As an allocation, it fails to represent price change effects, and is dependent on realistic estimates of useful life, residual value, and depreciation pattern by the reporting entity, rather than market inputs.



## K. Some Comments on Current Replacement Cost, Deprival Value, and Current Reproduction Cost as Substitutes for Current Input Market Value

- K1. The section discusses some issues relating to the comparative merits and limitations of current cost-based measurements of input assets as possible substitutes for current market value, as it would be defined and applied in this paper, when current market value is not practicable of faithful representation. The question is whether or when, current replacement cost, deprival value or current reproduction cost could be the most relevant input asset measurement basis that is practicable of faithful representation.

### Current replacement cost

- K2. The current replacement cost objective is to measure the most economic current cost to replace the existing operating capacities of input assets. This objective may seem to be conceptually closer to current market value than current reproduction cost because the most economic current cost to replace an existing asset's operating capacity can claim to be analogous to current market value property (f) (the incorporation of the current price implications of more efficient and effective alternatives). (See paper paragraph 28.) The operating capacity of an existing input asset may be replaced at a more economic current cost than its current reproduction cost when technological advancements have taken place since the asset was acquired. Technological effects may be most significant for plant and equipment and acquired intangible input assets.
- K3. To determine the current replacement cost of an input asset for which there is no reasonably efficient market price, one must be able to define an asset's operating capacity and have a practicable basis for estimating the current cost at which that capacity may be most economically achieved (including adjustments of related operating costs). These determinations seem to be open to potentially wide ranges of interpretation and opinion. Experience with standards permitting or requiring current replacement cost information in the late 1970s and early 1980s appeared to expose fundamental problems with these determina-

tions and, consequently, with the viability of current replacement cost as a coherent measurement objective.<sup>47</sup>

- K4. However, there continue to be advocates of current replacement cost who maintain that the standards of the 1970s and 1980s were not sufficiently developed and were not applied with sufficient expertise and experience. They claim that subsequent experience has demonstrated practicable, decision-useful applications.<sup>48</sup> It is understood, for example, that present applications normally assume the continuation of an entity's existing business model and the essential input components of that model, and that the focus is on whether reasonably obtainable information indicates that the existing function of an input asset within the entity's existing operating process could be achieved by a more economic version of that asset. If so, the current price of that more economic version of the asset is used, with appropriate adjustment for any differences of scale; if not, current reproduction cost is used.<sup>49</sup>
- K5. Some major issues seem to persist, however. In particular, the following two issues may be singled out:
- The treatment of excess capacity. For example, if a plant is expected to operate at 50 per cent of its operating capacity, the objective of determining the most economic cost to the entity would support measuring current replacement cost on the basis of operating at 50% capacity. Under the principles proposed in this paper, the current market price at which the plant would be acquired would reflect the market's evaluation of its usable capacity which may reflect very different expectations for its use than those of the entity's particular cash-generating process.
  - The measurement of the current replacement cost of an input asset that could be employed more economically at a different location. For example, the most economic

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47 There is much literature on current replacement cost dating back to this period. Standards providing for supplementary current cost information included FASB Statement of Accounting Standards No.33, *Financial Reporting and Changing Prices*, 1979; and Accounting Standards Committee (UK) Statement of Standard Accounting Practice 16, *Current Cost Accounting*, 1980, which were withdrawn or indefinitely suspended (the FASB standard in 1986 and the UK standard in 1985). One summary analysis of current cost measurement issues is provided in IASBb, 2005: paras. 320-61.

48 See, for example, Shriver, 1995. His research indicated that while early empirical studies found that current cost data disclosed under the FASB and UK standards did not possess incremental information content in explaining stock prices, more recent studies found significant incremental information content for current cost data over historical cost data.

49 For example, in Australia, public sector entities are required to revalue most non-financial assets. An acceptable basis is "written down current cost" determined by reference to current market buying prices or, when such prices are not available, the lower of current replacement cost and current reproduction cost. See Public Sector Accounting Standards Board of the Australian Accounting Research Foundation, 1998, paras. 11.3-11.3.2.

current replacement cost of an operating plant property located in a prime location for development of condominiums may be in a less expensive location. Current replacement cost measured on the basis of operation in the more economic location would differ from the current market price that would be paid to acquire the existing plant property in its current location.

- K6. In each of these two situations, the replacement cost operating capacity objective is inconsistent with the current input market price objective. The replacement cost objective — to reflect the private entity expectation of the most economic cost of an asset's operating capacity in these situations — would, therefore, not seem to be a relevant substitute for the current input market value for these assets.
- K7. In summary, this brief analysis suggests that some significant questions would need to be addressed within the context of proposed Principle 2, to assess the relevance and potential limitations of current replacement cost as a substitute for current prices of input assets in the markets in which they would be acquired.

## Deprival value

- K8. An additional criticism of current replacement cost, as with all cost-based measurements, is that it lacks a lower recoverable value limit. Deprival value has been proposed as the rational recoverable value framework for current replacement cost. The theory of deprival value is that the current value of an asset to a business entity is equal to the current economic loss that the entity would incur if it were deprived of that asset. The theory holds that this loss could not exceed the current cost to replace the asset's operating capacity. A higher value is not justified since the entity could replace the asset's operating capacity at its lower current replacement cost. It is further reasoned that a rational entity would not replace an asset when its recoverable amount is less than its current replacement cost. In this case, if deprived of the asset, the entity stands to lose its recoverable amount. The theory envisages two possible recoverable amounts. The entity could sell the asset for its net realizable value, or it could continue to use the asset in its cash-generating process to achieve its value in use. A rational entity can be expected to choose the alternative that yields the higher recoverable amount. This chain of logic leads to the following definition of deprival value:

Deprival value is the lower of current replacement cost and current recoverable amount, with recoverable amount being the higher of net realizable value and value in use.

- K9. The theoretical basis of deprival value differs from the objective of current replacement cost, because the recoverable amount of an input asset would not provide for the replace-

ment of its current operating capacity. Rather the measurement of an input at a recoverable amount that is less than its current replacement cost assumes that the input asset's operating capacity will not be replaced.

- K10. The essential elements of deprival value are embodied within the properties of current market value, as defined, and applied under the principles proposed in this paper. This may be demonstrated by examining the elements of the deprival value of an input asset that has an observable current market price, in a very simple example. The asset's current replacement cost is its current market price plus transaction costs (say  $100 + 2 = 102$ ). Thus, since current replacement cost exceeds current market price, the asset's deprival value is the higher of its net realizable value and its value in use. Its net realizable value in the market in which it was acquired would be that market price less costs to sell (say  $100 - 2 = 98$ ).<sup>50</sup> The market's measure of the asset's value in use is its current market price (100). Thus, the current market price of this input asset would be its deprival value. However, this example assumes away the possibilities of excess capacity or more productive location (the two issues raised above in the discussion of defining current replacement cost), in which cases current market value could well significantly exceed the most economic current cost to replace existing operating capacity. Van Zijl and Whittington (2006) propose that the traditional concept of deprival value be reinterpreted to be net realizable value when net realizable value exceeds replacement cost, on the basis that this excess implies a redevelopment or redeployment opportunity.
- K11. In summary, it is proposed that the concept of deprival value does not incorporate any properties that are not embodied in the current input market value, and that the traditional concept of deprival value may require some reinterpretation to serve as a possible substitute when current input market value is not practicable of faithful representation.
- K12. In addition, deprival value is subject to some seemingly significant measurability issues. In addition to the current replacement cost measurement issues referred to above, the measurement of the recoverable amount of an individual input asset is problematic. In particular, lacking a current input market price, the value in use of an input asset presumably requires an estimate of the present value of the future cash flows that the individual input asset will generate through its future contribution to the entity's cash-generating process. It has been well established that it is impossible to determine how much any one input among many will contribute to the revenues to be generated by a cash-generating

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50 There may be a different exit market price for this input asset. Such exit market price could be much less than its current input market price and value in use — perhaps its scrap value. Any excess of its net realizable value in an exit market over its current input market price may be presumed to be additional value created by the entity's operating process, which would be subject to separate recognition when the conditions of proposed Principle 1 are met.

process.<sup>51</sup> IASB IFRS 13 addresses this problem by measuring an input asset at its fair value, which it defines as its exit price in a hypothetical market in which it would be sold to a buyer who has the facility to use the input in a similar revenue-generating process with similar complementary inputs. (See discussion of this issue at Appendix section H.) It is not clear how this fair value would differ from the current price of the input in the market in which it would be acquired (i.e., its input market value), and how this hypothetical fair value would be determined if that market price is not practicable of faithful representation.

- K13. The lower recoverable value amounts to be determined under the deprival value decision rule are, in essence, provisions for input asset impairment. They may be compared to the proposals for measuring asset impairment proposed in this paper. Proposed Principle 6 would apply a recoverable value-in-use test only at the level of the cash-generating unit as a whole.

### **Current reproduction cost**

- K14. Current reproduction cost may seem to have less relevance as a substitute for current market value than current replacement cost because current reproduction cost does not purport to reflect the price effects of the availability of more economic replacements for an entity's existing input assets (and therefore would not meet current market value property (f)). However, advocates of current reproduction cost argue that attempting to measure the cost to replace the operating capacity of an existing asset with another more economic asset that the entity does not own is a matter for future investment decisions and is not a relevant basis for reporting on an entity's actual past activities. They argue that the measurement of current operating profit by matching the current cost of actual inputs sacrificed against current revenues achieved in a period will readily reflect the effects of using less than the most economic inputs available.<sup>52</sup> Further, current reproduction cost may be practicable of faithful representation for input assets for which current replacement cost is not. As with all cost-based measurements, current reproduction cost needs to be supplemented by a relevant recoverable value test. See this paper's impairment proposals at paragraphs 114-124.

### **Summary**

- K15. Proposed Principle 2 provides that, when the current market value of an input asset is not practicable of faithful representation, the objective should be to select the most relevant substitute (the measurement that most nearly reflects the properties of current market value) that is practicable of faithful representation. Judgments of the comparative relevance

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51 See discussion of this issue in section J of this Appendix.

52 The seminal work on current reproduction cost is Edwards and Bell, 1961.

and practicability of faithful representation of the current cost-based possibilities and historical cost/market value, may be expected to differ depending on the nature of input assets and the circumstances of a reporting entity's operating processes. These judgments should be the focus of financial reporting measurement standards. To the extent that standards are silent, they would have to be made by reporting entities and their auditors.

- K16. The above brief analysis suggests current cost-based possibilities warrant renewed attention within the context of the principles proposed in this paper. It seems reasonable to expect that understanding of the conceptual foundations and limitations of these current-cost based measurements, and of their practicability of faithful representation, will improve with education, study and experience.

## L. Capital Maintenance

- L1. Economic income is generally defined in theory as the amount of resources that an entity could distribute during a period while maintaining its capital. The existing IASB Framework stresses the linkage between capital and income, and observes that the concept of capital maintenance “provides the point of reference by which profit is measured; it is a prerequisite for distinguishing between an entity’s return on capital and its return of capital” (IASB, 2010b: para. 4.60).
- L2. This puts the focus on defining capital. The first decision is whether capital should be defined as that of the proprietary (residual equity) interest or as that of the entity as a whole (liabilities plus equity). Financial reporting has embraced the proprietary definition. The traditional debate has been between “financial” and “physical” (operating) capital maintenance concepts. These are briefly defined in the existing IASB Framework (IASB, 2010b: paras. 4.57-4.65). The capital to be maintained under existing mixed measurement accounting is described as financial in nature, but it can be explained only as the value in money ascribed to an entity’s net assets, with value being determined in accordance with whatever bases are used to measure the entity’s assets and liabilities. This is an empty, circular concept.
- L3. Adoption of the principles proposed in this paper would result in a particular financial concept of capital. If all the assets and liabilities of an entity could be measured at their current market values, as defined in this paper, capital (net assets) would equal the sum of the current market values of its individually recognized assets less liabilities in the markets in which they would be acquired, issued or incurred. This measure of capital (wealth) would represent the market’s valuation of the cash-generating ability of the entity’s net assets at a measurement date without any anticipation of the value that is yet to be created by the entity’s future operating activities. Capital would then reflect the market value that has been achieved by an entity’s operating, investing and financing activities to the measurement date. Income reported for a period would equal the market’s valuation of the cash-equivalent amount that the entity could distribute to equity holders while maintaining this current market value of its capital (net assets) during that period. This capital market value differs from the value that the market would place on the entity as a whole because the market value of the entity as a whole anticipates the results of future entity operations.<sup>53</sup>

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53 Proposed Principle 6 would, however, modify this by providing for an impairment test at the level of the cash-generating unit.

- L4. The above describes the concept of capital on the basis of the ideal current market value measurement of an entity's recognized assets and liabilities. This is a single market value concept of capital (i.e., all assets and liabilities would, on the basis of the ideal, be measured at their current prices in the markets in which they would be acquired, issued or incurred at any given measurement date).
- L5. This ideal, current market value, measure of capital may be compared with the operating capacity and other possible capital maintenance theories.<sup>54</sup> On the basis of the current market value concept of capital proposed in this paper, if the market prices of an entity's net assets increase, then the market's valuation of the present value of their cash-generating ability will have increased, and the entity will report income. Proponents of operating capacity maintenance will point out that the entity's operating capacity will not have increased as a result of increases in the market prices of input assets. Therefore, if this price increase effect is treated as income and paid out in dividends, the entity will have reduced its operating capacity (i.e., it will be able to produce fewer units of output). But, the entity will have maintained its earning power in current market value terms. In other words, its financial capital will have been maintained in terms of the ability of its net assets to achieve the current market return that is commensurate with the market's current evaluation of the risks of its assets and liabilities. Thus, the entity's financial position and income would be determined by what it has achieved in terms of current input market values, rather than in terms of its physical operating capacity. Both concepts of capital would ideally be measured at current entry market prices. However, as noted in Appendix section K, there are some questions with respect to how some significant types of situations would be treated under operating capacity maintenance theory (for example, where a plant has excess capacity, or where its most economic operations would be in a different location). Putting aside these questions, the difference in theory is that under the operating capacity maintenance concept of capital, input asset price change effects would be treated as capital adjustments, while under the proposed current market value concept, they would be included in income. The arguments for and against the inclusion of these gains and losses in income have been addressed in section D of this Appendix.
- L6. Of course, the current market value ideal is not attainable, because many of a typical business entity's assets and liabilities would have to be reported on the basis of substitute measurements that lack significant properties of current market value. Thus, the implications of the proposed principles for capital maintenance must be interpreted in light of the

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54 Stevenson, 2007 examines "fair value" as defined by the FASB and IASB. His concern is that it lacks a coherent capital maintenance base and is shifting attention away from fundamental concepts of capital and income as they have been embodied in the current cost and subjective value theories of Edwards and Bell and in the theories of operating capital maintenance and deprival value. The concept of current market value, as defined and applied in this paper, provides, it is proposed, a more promising capital maintenance context than that perceived by Stevenson for "fair value".

limitations of utilized substitutes. (The operating capacity maintenance theory is also subject to measurability limitations and some major questions pertaining to its fundamental measurement objectives. (See section K of this Appendix.)

- L7. The measure of capital that would result from the principles proposed in this paper could be adjusted to reflect a general price level measure of the effects of inflation or deflation on the general purchasing power of money.



## M. Business Models and the Theory of the Firm – Implications for Measurement in Financial Reporting

- M1. An extensive body of literature on the economic theory of the firm has recently attracted attention in accounting publications. Of particular interest is a study by the Financial Reporting Faculty of the Institute of Chartered Accountants of England and Wales (ICAEW, 2010). It examines this literature in some depth with the objective of assessing insights that may be gleaned from it for measurement in financial reporting. The study suggests that “it seems to be impossible to devise a sensible approach to financial reporting measurement that does not reflect firms’ business models” (Ibid.: 3). A primary purpose of this study is to consider whether this literature may help provide answers to “the dispute over the proper limits of market prices — or fair value — in financial reporting” (Ibid.).
- M2. There are a number of competing theories of the firm in economics. But at the basis of these theories is the idea that the firm (business profit-oriented entity) exists as an alternative to markets, that it “supersedes” markets. Outside the firm, market price movements direct production toward a balance between supply and demand. Within the firm, market transactions are replaced by the “entrepreneur coordinator” who directs production activities to create economic value. The basic theory holds that firms exist because they can avoid the costs of transacting in markets, and because the entrepreneurs believe that they can generate value internally more efficiently and effectively than can be achieved through market transactions. The role of markets is not replaced by firms, because firms must deal in markets to acquire their factors of production (buy inputs) and ultimately to realize the results of their internal activities (sell their outputs).
- M3. This basic theory has spawned a large body of literature and a number of extensions of the basic idea. It has also generated a number of issues on which theories and empirical evidence exist. One prominent example is agency theory which is concerned with the forms and terms of contracts (including incentives) between principals (owners/shareholders of a firm) and agents (managers) that will help ensure that the agents act in the best interests of the principals. A vital element of such contracts is the provision of reliable accounting information about firms’ financial activities.

- M4. What may be the implications of the body of literature on the theory of the firm for financial reporting measurement? The ICAEW study, in common with most others who have considered the question, approaches this from a “business model” perspective. In general terms, “business model” is defined as the basis on which a firm generates economic value, that is, how it makes money. “A firm’s business model describes both its internal activities and its relationship with markets” (ICAEW, 2010: 22). This concept of a firm’s business model is fully consistent with this paper’s focus on the economic value creating activities of an entity’s cash-generating process.
- M5. The ICAEW study reasons that financial reporting measurement should reflect the activities of an entity’s business model (i.e., the process by which it creates economic value). The ICAEW study focuses on the internal activities of the entity. It observes that: “A good deal of economic activity takes place within firms rather than through market transactions between firms” (Ibid.: 24). It then suggests that this “raises questions about the practicability and relevance of financial reporting measurements based on market prices” (Ibid.). It proposes that there are two “key issues”. The first is that “market prices will often — perhaps usually — be unavailable” , and second is that, “Even if market prices are available, why would they provide the most useful measurements for assets that are not in fact being exchanged, but form part of an in-firm process?” This reasoning leads the study to propose that historical cost would generally be the most useful basis of measurement “where the firm’s business model is to transform inputs so as to create new assets or services as outputs” (Ibid.: 40).
- M6. This paper disagrees with the ICAEW’s proposed conclusion. The ICAEW study misses the vital point that firms buy their inputs in the market place and that the results of their internal activities are ultimately determined by the markets for their outputs. As observed above, the business model of a firm embraces both its internal activities and its relationship with markets. The principles proposed in this paper would reflect the activities of an entity’s business model (i.e., of the cash-generating process by which it creates economic value). They would do so by reflecting the relationship of an entity’s internal activities with its input and output markets. The results of its internal activities would be measured on the basis of input market prices until such time as its internal cash-generating process has generated economic value that is validated by output market prices.
- M7. Some appear to have misconstrued the implications of business model theories for financial reporting measurement by interpreting them in an overly narrow and restricted sense. This was recently illustrated when the FASB rescinded its previous decision to require loan assets to be measured at fair value thus permitting them to continue to be carried on an historical cost basis. An official of the American Bankers Association was quoted as commenting

that the decision “recognizes investor concerns that a company’s business model should be a key factor in measuring financial instruments” (Jeffrey, 2011: 3). The “business model” argument for measuring loan assets at amortized cost is essentially that the business model of banks and possibly other lending institutions is not designed to manage interest price change risk but is focused only on credit risk and recoverability of amounts loaned. The response of this paper is that, whether or not they choose to manage interest rate risk, their business model (the process of extending loans at fixed interest rates) exposes them to this risk. In other words, a business model is defined by what a business process actually is and encompasses all its risks; it is not defined by management’s professed intention to limit its management of some of the risks of its business process.



## N. An Historical Note: A Market Simulation Theory of Accounting Measurement

- N1. In the mid-1980s George J. Staubus sought “a central idea” that would explain “the bulk of accounting measurement practices” (Staubus, 1985: 53). He proposed that:

“The common thread that holds GAAP measurement practices together is the notion of market simulation; in the absence of observable current market prices for setting-specific assets and liabilities, accounting simulates such prices by selecting and blending pertinent observed market prices and other evidence in accordance with accepted principles of market economics.” (ibid.)

- N2. He concluded, on the basis of an extensive examination of then existing accounting measurement practices, that: “Current practice represents very crude market simulation accounting”, but that: “The more important point is that the market simulation explanation fits present accounting measurement practices better than any other single explanation — better than historical cost, better than matching costs and revenues, better than exit values or current cost” (ibid.: 74).
- N3. Staubus went on to advocate “that market simulation should be adopted as the explicit objective of accounting measurement, constrained only by user concerns, such as understandability and reliability, and the pervasive cost/benefit test” (Staubus, 1986: 123). This proposal is generally consistent with the current market value measurement objective proposed in this paper — and with this paper’s proposal that, when this measurement ideal is not practicable of faithful representation, one should look for the most relevant substitute that is practicable of faithful representation. Staubus even suggested that “one might consider the parallel between the market simulation accounting hypothesis and the efficient market hypothesis” (Staubus, 1985: 75). Staubus seemed, however, to focus on “simulations based on *probable course* exit prices” rather than “syntheses of entry prices of inputs” (1986: 127).



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# Some Questions for Respondents

The following is a set of questions that are intended to help respondents focus their thoughts as well as to facilitate ensuing discussion, analyses, and sharing of views. Respondents should not, however, feel compelled to answer all these questions and may well wish to address issues that are not covered in these questions.

Comments are welcome from both those who agree with positions and supporting arguments proposed in this paper and those who disagree. Responses will be most helpful if they clearly indicate and explain the issues to which they relate, and if the positions taken and the arguments supporting them are rigorously developed. Respondents are requested to consider the analyses of issues set out in the Appendix to the paper in developing their comments.

Interested parties are encouraged to visit and submit their comments to the CICA website, [[www.cica.ca/measurement](http://www.cica.ca/measurement)]<sup>55</sup>. The author is intending to comment on issues raised in comments received and to attempt to stimulate productive discussion of the issues on his blog at <http://measurementframework.blogspot.ca/>. Interested parties are invited to participate in the discussion of issues that it is hoped will develop on the blog.

## Question 1

The paper proposes that Current Market Value represents the ideal (most relevant) measurement basis for financial reporting by profit-oriented entities. It proposes the following definition of “Current Market Value”:

The current market value of an asset or liability is its present exchange price determined, on the basis of publicly available information, by the competitive interaction of willing arm’s-length buyers and sellers in an open, active and orderly market.

The paper proposes the properties that are embodied within Current Market Value, as defined, that make it the ideal. **[See paragraphs 25-31 of the paper and sections B, C, H and N of the Appendix to the paper.]**

- a) Do you agree with this definition?
- b) Do you agree that Current Market Value, as defined, has the proposed properties?
- c) Do you agree that Current Market Value, as defined is the ideal (most relevant) measurement basis for financial reporting by profit-oriented entities?

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55 See further discussion of the website in the Preface to this paper.

If you disagree with one or more of these positions, please explain the reasons for your disagreement as clearly and completely as possible. If you agree, but believe that additional issues or evidence need to be addressed, or that the exposition could be improved, please set out and explain them.

## Question 2

Principle 1 proposes that:

Market value created by a cash-generating process (revenue) should be recognized when the process (1) has achieved an output that has a current market value that is practicable of faithful representation, and (2) has generated the good and/or service that is the source of that output market value. **[See paragraphs 36-49 of the paper and section G of the Appendix.]**

- a) Do you agree with this proposed principle? If you do not agree, please explain as clearly and fully as possible (i) in what respects you disagree and why, and (ii) what alternative you recommend and why that alternative is superior to proposed Principle 1.
- b) Do you agree with the paper's proposed concepts of "practicability" and "faithful representation"? (Note that the proposed concept of "faithful representation" differs from its definition in the joint IASB and FASB *Conceptual Framework* **[see paragraphs 39-42 and 133-138 of the paper and section A of the Appendix]**). If you disagree, please explain the basis for your disagreement and the alternative you recommend.

## Question 3

Principle 2 proposes that:

Assets that are inputs to cash-generating processes should be measured at current prices in the markets in which the inputs would be acquired by the entity or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values or in substitute measurement bases that reflect current input values would be reported immediately in the statement of income.

- a) Do you agree that input assets should be measured at input prices? If not, why not? **[See paragraph 52 2) of the paper.]**
- b) Do you agree with continuously re-measuring input assets at their current values in input markets with gains and losses in income, when such values are practicable of faithful representation? **[See paragraphs 52 4) and 84-92 of the paper and sections D and I of the Appendix.]** If you do not agree with the relevance of remeasurement

as proposed by Principle 2, please explain as clearly and fully as possible why you disagree, and what alternative you believe would be more relevant, and why. It would be most helpful if your arguments could take into account the analysis set out in section D to the Appendix.

- c) Do you agree that, when current market prices for inputs are not practicable of faithful representation, one should look to the most relevant substitute that is practicable of faithful representation? If not, why not?
- d) Do you agree with the analysis of the comparative relevance of other measurement bases relative to Current Market Value? **[See paragraphs 62-83 of the paper, and sections J, K and M of the Appendix.]** If you do not agree, please explain why. In particular, do you believe that one or more of these bases have properties not recognized in the paper and Appendix that give it (them) greater relevance than Current Market Value? If so, please explain these properties and, if possible, provide supporting references to theoretical or empirical evidence supporting your position.

#### Question 4

Principle 3 proposes that:

Except as provided in Principle 4, business operating liabilities should be measured at current prices in the markets in which the liabilities were issued or incurred or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values or in substitute measurements that reflect current values would be immediately reported in the statement of income. **[See paragraphs 93-100 of the paper, and section F of the Appendix.]**

Principle 4 proposes that:

Business operating liabilities should be measured at current prices in the markets in which they could be settled prior to maturity when such prices are lower than would be determined under Principle 3, if these prices could be achieved without additional cost to the entity (other than transaction costs) and are practicable of faithful representation. **[See paragraphs 101-106 of the paper.]**

- a) Do you agree that business operating liabilities should be measured on the basis of their prices in the markets in which they were issued or incurred except under the conditions proposed in Principle 4? If not, why not?

- b) Do you agree with continuously re-measuring business operating liabilities at their current values with gains and losses reflected in income, when such values are practicable of faithful representation?
  - i) If you do not agree, please explain as clearly and fully as possible why, and what would be the superior alternative and the basis for its superiority.
  - ii) If you do agree, do you agree that this current value should always include non-performance (credit) risk? **[See paragraph 98 of the paper, and section F of the Appendix.]** Please explain the basis for your position.

### Question 5

Principle 5 proposes that:

Investing and financing assets and liabilities should be measured at current prices in the markets in which they were acquired, issued or incurred or, when such prices are not practicable of faithful representation, on the basis of the most relevant substitute that is practicable of faithful representation. Changes in current market values, or in substitute measurements that reflect current values, should be immediately reported in the statement of income. **[See paragraphs 107-113 of the paper, and sections E and M of the Appendix.]**

Do you agree with this proposed principle? If not, please explain why not by taking into account the analysis at sections E and M of the Appendix.

### Question 6

The paper addresses the measurement of impairment at the level of individual input assets and at the level of a cash-generating unit. Principle 6 proposes that impairment be recognized at the cash-generating unit of account level as follows:

The sum of the carrying amounts of business operating assets less liabilities comprising a cash-generating unit should not exceed the current market value of that cash-generating unit or, if that market value is not practicable of faithful representation, of a current value substitute that is practicable of faithful representation. **[See paragraphs 114-124 of the paper.]**

- a) Do you agree with the paper's analysis of impairment at the level of individual input assets? If not, why not?
- b) Do you agree with proposed Principle 6? If not, why not?

**Question 7**

Do you agree with the supporting disclosures discussion? **[See paragraph 125 of the paper.]** If not, please explain why not and the disclosures you would propose and the bases for them.

**Question 8**

The paper proposes that the Current Market Value measurement ideal as applied by the proposed principles embodies a relevant financial capital maintenance concept. **[See paragraphs 126-129 of the paper, and section L of the Appendix.]**

Do you agree that there is a valid and relevant concept of capital maintenance underlying the proposed principles along the lines of that proposed? If not, please explain your position, and how important this issue is in your opinion.

## Notes

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## Notes



