Some observations on the FASB Proposed Statement of Financial Accounting Standards - 'Fair Value Measurements'

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Executive Summary

General comments:

1. There is much to agree with this ED. It provides guidance for preparers and users of financial statements to better understand the implications of the move towards a market-price based system of accounting. There is confirmation that a statement of financial position should be just that - an indication of an entity's financial state (a statement of net worth) - and not an aggregation of bookkeeping debits and credits.

2. Being members of the 'Sydney School' who have long advocated the need to report assets at their exchange prices and liabilities at their face value we agree with the definition of fair value being based on an exchange price. Further, we accept the proposition that in the absence of actual exchange transaction, there is a need to approximate an exchange price assuming a hypothetical exchange transaction motivated by normal market conditions. This has long been advocated by exchange price theorists, such as Raymond Chambers and Robert Sterling.

3. The guidance note is timely and provides further impetus for acceptance of accounting as an information system providing continuous market-based data for informed decision making, evaluations and comparisons by all interested parties.

4. Any guidance to assist in measuring 'fair value' should mesh with an overall conceptual framework statement on measurement. Without such a framework what is entailed in this guidance statement needs to be clearly specified.

5. Presumably it would be useful to indicate that recourse to such a guidance statement is consistent with allowing the use of professional judgement rather than imposing a fixed 'rule' approach.

6. This Statement suffers from the Board putting the 'cart before the horse' by examining 'fair value measurement issues' prior to specifying in a more general
measurement concepts statement, the function of accounting and specifying general measurement criteria.

7. Regarding that oversight, the overarching need of accounting is to produce audited data that present fairly the financial state of affairs and changes therein. The data first and foremost must be serviceable for that purpose. A need to specify a serviceability criterion is the most critical deficiency in this proposed statement.

8. The current ED suffers from its continued emphasis on consistency and comparability criteria, and adherence to trading-off the relevance and reliability criteria. The ED does recognise that to date there are no satisfactory trade-off rules. It is our view that instead of emphasising these criteria an overarching serviceability criterion should be adopted.

9. The notion of ‘fair value’ has a long history. It has drifted from non-financial reporting settings into financial reporting. This is not indicated in the current ED.

10. The notion of fair value was developed initially within settings other than financial reporting. They were essentially in settings related to (i) insurance compensation, and (ii) monopoly utility price determinations. It has been shown to have ‘drifted’ from those settings into the financial reporting area (see Appendix I, Clarke, 1998).

11. The Statement should differentiate ‘measures’ and ‘values’. Their synonymous use in the past has resulted in the accounting literature producing confusion rather than elucidation (see Appendix II, Chambers, 1998).

12. We propose that the measurement process adopted for assets and liabilities should be identical. The ED misses an opportunity here by not proposing that all assets and liabilities be measured at fair value.

Specific Issues:

13. Issue 1, Definition of fair value - The extant accounting literature provides a good theoretical and empirical basis for approaching Issue 1, Definition of fair value. It is unclear to what extent this has been drawn from materials cited in the FASBFV. As noted in summary point 2 above, we concur with the definition of fair value being based on an exchange price; and we accept the proposition that in the absence of actual exchange transaction, there is a need to approximate an exchange price assuming a hypothetical exchange transaction motivated by normal market conditions.


15. Present values are calculations (not measures) and it should be made clearer that they should only be used as an approximation for estimating an exchange price for purposes of determining a ‘fair value’ – that is, the fair value principle is to be maintained.
16. **Issue 3, Active Markets** - There is much to commend in the ED discussions on this issue. It is worth noting that such issues were addressed by the earlier work on measuring derivatives and prior to that when, for example, CCA manuals or 'exit price' and 'current cost' guides (as in the NZ Waikato inflation accounting project; Sandilands, Hyde, etc) were being developed in the 1970s and 1980s.

17. **Issue 4, Valuation Premise** - see comments in point 1 above.

18. **Issue 8, Measurement of Blocks** - The argument relied upon by the FASBFV for not including a blockage factor is well developed in C29-C32. In Clarke *et al.*'s *Corporate Collapse* (2003) we analysed the 'blockage adjustment' factor and our conclusions are similar to those of the majority of FASB staff.

19. **Issue 13.** It is our view that it is unhelpful that the FASB should refer to 'unit of account' in the manner that it has - it is used in the FASBFV to refer essentially to 'aggregation' issues - in earlier accounting and economics literatures, especially in monetary economics, the phrase unit of account has a specialised, technical meaning related to money - we cannot see any reason for its use in the way adopted here. It is more likely to confuse than elucidate. Level of aggregation has been used extensively in the measurement literature and should be retained.
General Observations:

Following are some general observations on the FASB Proposed Statement of Financial Accounting Standards - 'Fair Value Measurements' which the FASBFV (p. 1) notes will apply 'broadly to financial and non-financial assets and liabilities that are measured at fair value under other authoritative accounting pronouncements'.

FASBFV (C12, p. 30) notes: 'This Statement does not establish requirements for when to measure assets and liabilities at fair value'. This is to be specified on a project by project basis and the likelihood of political factors dominating thus becomes more likely. The current problems of a mixed system of accounting are likely to remain. The kernel of the problems with mixed measures was addressed well in the late 1920s by Canning (1929), but then seemingly have been ignored by most accountants for decades since.

These comments adopt the FASB Proposed Statement adumbration. The initialisation FASBFV is used as shorthand. References to paragraph (and associated page references) in the proposed statement itself will be designated FASBFV (1, p. i or 1 (p. 1); paragraph (and associated page) references to material in the Appendices, A, B, C will appear as FASBFV A1 (p. 1), B1 (p. 1), C1 (p. 1), D1 (p. 1), E1 (p. 1).

Introduction.

The FASBFV is clearly timely, topical and important.

Critically, the FASBFV notes in its Introductory section, that the proposed Statement seeks to provide: 'guidance for how to measure fair value' (p. i), expecting that 'improvements to financial reporting should result from increased consistency, reliability and comparability' (p. vi). The Discussion section states (FASBFV C1, p. 30) that: 'the Board's near term objective ...establishes a framework that builds on current practice and requirements, clarifying the fair value measurement objective and its application under other pronouncements that require fair value measurements (refer to Appendix E)'. This Statement continues the Board's move towards a 'principles based' system of accounting based on current value data. We concur with the FASBFV C1, (p. 27) statement that 'users of financial statements generally have agreed that that fair value information is relevant' for decision making. However, we are disappointed that the Statement (FASBFV, C12, p. 30) does not express the need for all assets and liabilities to be measured at some form of current value, namely 'fair value'. It notes: 'This Statement does not establish requirements for when to measure assets and liabilities at fair value'. These are to be specified on a project by project basis and the likelihood of political factors dominating thus becomes more likely. The current problems of a mixed system of accounting are likely to remain.

In 2000 the FASB CON #7 had foreshadowed 'measurement' to be a critical element in the US Conceptual Framework exercise, begun in the late 1970's. As one of the most relied upon measurement attributes in the FASB's new millenial standards, fair value was deemed to require immediate consideration by the FASB. Hence it was decided to bring forward an accounting standard on FV prior to considering the wider measurement standard. Failure to address the broader issue is understandable on pragmatic grounds, but this may create longer term problems. Inconsistencies and ad-hoc solutions are likely to result. It will be argued below that it is difficult to see
how the specific fair value measurement guidance developed in this Statement will 
provide the Board with a foundation for making improvements to the measurement
 guidance [generally] in its conceptual framework in a subsequent phase of this
 project.' (FASBFV, p.vi).

Brief historical background.
We provide a brief history of accounting measurement generally, and in respect of FV
measurement specifically. 'FV' has become a critical basis for measuring assets and
liabilities. The FASBFV (pp. i and 2) defines it as 'the price at which an asset and
liability could be exchanged in a current transaction between knowledgeable,
unrelated willing parties'.

Most would agree that accounting pre-1930s was a mixed system of accounting
measures. It sought to satisfy simultaneously the functions of accountability
(stewardship) and decision making (see Chatfield, 1977). Some, like Littleton (1953)
have suggested that this system was primarily historical cost based. Chambers (1994),
inter alios, however, noted that prior to the 1930s depression, market values and cost
prices were equally used as 'proper' measurement bases. Balance sheet and income
statement data were seemingly equally required from various users' perspectives. Post
1930s the income statement (emphasising earnings) gained a foothold and the so-
called matching of costs (Paton and Littleton, 1940) gained momentum, as a basis of
accounting. 'Cost' gained the ascendancy as the prime measurement basis, especially
in the US. In other Anglo-American countries, the UK, Australia and New Zealand,
whilst cost arguably also became dominant, there was recourse in many settings to
market values, first for durable assets (in the form of revaluations) and then for
marketable securities, and finally, for measuring financial derivatives - both for assets
and liabilities. This was especially the case for the private sector. In this context 'FV'
became a critical basis for 'measuring' assets and liabilities (as noted in the FASBFV).
It is a major element in the current mixed measurement system of private sector
accounting.

We should note that various formulations of fair value have appeared in the
accounting literature over the past century. First in the public utility pricing debates of
the late 1800s and early 1900s; then in the debates regarding the effects of inflations
on accounting during the 'great inflation' following World War I up to the 1929 stock
market crash; again following World War II, especially in the United Kingdom during
the late 1940s and early 1950s, as the accounting profession pressed for corporate
taxation take into account the fair value of the assets employed; and then during the
inflationary period during the late 1950s, 1960s and early 1970s. (Clarke, 1982).

During the latter decades of the 20th century focus again has been on some forms of
accounting based on market values, this time especially in the public sector - but also
in the private sector in discussions about accounting for financial instruments and also
for recording assets subject to business combinations. Drawing on ideas that had been
extensively discussed in private sector inflation accounting debates of the 1970s, a
variant of 'fair values', namely optimised deprival values were suggested as the
measurement basis for long-lived infrastructure assets (see especially the 1985 UK
Byatt Report recommendations and, say, Walker, Clarke and Dean, 2000). It is
problematic whether this was predominantly for financial reporting or 'internal
efficiency purposes', or for regulatory-determined price-setting purposes.
It should be noted that the notion of fair value had considerable currency in the utility pricing debates during the first twenty-five years of the twentieth century. The notion of the current replacement cost and selling price of the assets dedicated to the utility production were components of the ‘fair value rate base’ for utility pricing — the pricing for the output of in effect non-adaptive companies. Yet the fair value notion drifted into the literature referring to the valuation to be placed on the assets of adaptive companies. (Clarke, 1982).

It is worth noting that the issues outlined in the FASBFV had been aired extensively by 1950s/1960s academics as part of the so-called 'normative' debates (see SATTA, 1977). Especially measurement issues like the question of the appropriate level of asset aggregation (described in the FASBED 'FV' as the unit of account) and related additivity issues had been to the fore then.

This short preamble provides the backdrop for our specific observations on the FASBFV. We comment on the proposed paragraph reforms seriatim.
Specific Observations:

*Issue 1, Definition of fair value* - The primary objective of the ED is to provide guidance 'to estimate the price in the absence of an actual exchange transaction'.

The extant accounting literature provides a good theoretical and empirical basis for approaching *Issue 1, Definition of fair value*.

The position of the FASBFV generally is sound in respect of the definition. However, we disagree with the reasoning in C27 leading the Board to reject the suggestion that notions of fair value and fair market value are not identical. From the point of view of a professional making a call ultimately on what estimate to include in respect of the 'fair value' of an asset or liability, this seems contestable.

*Issue 2, Valuation Techniques* - the ED seeks to clarify the use of PV to estimate fair value - it draws on CON #7.

The ED repeats the confusion in respect of the notions of 'values' and 'measures'. Present values calculations (not measures) should only be an approximation for determining a 'fair value'. The 'confusion' referred to is discussed extensively in Chambers (1998, Appendix II).

*Issue 3, Active Markets* - the ED seeks to emphasize market inputs, including those from active, readily and regularly available prices.

There is much to commend in the discussions on this issue. It is worth noting that such issues were addressed by the earlier work on measuring derivatives and prior to that when, for example, CCA manuals or 'exit price' and 'current cost' guides (as in the NZ Waikato inflation accounting project; post-Sandillands and Hyde Working Guides, etc) were being developed in the 1970s and 1980s.

*Issue 4, Valuation Premise* - no additional comment to that made in point 1.

*Issue 5, Fair value hierarchy* - no additional comment.

*Issue 6, Level I Reference Market* - this addresses the notion of measures being determined in the 'ordinary course of business' as discussed by Chambers (1966) and Sterling (1970).

*Issue 7, Pricing in active dealer markets* - no comment.

*Issue 8, Measurement of Blocks* - This issue seeks to establish the appropriate level of aggregation. The argument relied upon by the FASBFV for not including a blockage factor is well developed in C29-C32. In Clarke et al.'s *Corporate Collapse* (2003, pp.277-282) we analysed the 'blockage adjustment' factor and our conclusions are similar to those of the majority of FASB staff.
Issue 9, Level 3 Estimates - no comment.

Issue 10, Restricted Securities - no comment.

Issue 11, Fair value disclosures - no comment.

Issue 12, Effective Date - no comment.

Issue 13, Other issues
Consistency, Comparability and Relevance and reliability trade-off - The current ED suffers from its continued emphasis on consistency and comparability criteria, and adherence to trading-off the relevance and reliability criteria. The ED does recognise that to date there are no satisfactory trade-off rules. It is our view that instead of emphasising these criteria an overarching serviceability criterion should be adopted.

Unit of account - It is our view that it is unhelpful that the FASB should refer to 'unit of account' in the manner that it has (e.g. C28, p.34) - it is used to refer essentially to 'aggregation' issues. In earlier accounting and economics literatures, especially in monetary economics, the phrase unit of account has a specialised, technical meaning related to money - we cannot see any reason for its use in the way adopted here. It is more likely to confuse than elucidate. 'Level of aggregation' has been used extensively in the measurement literature and to avoid unnecessary confusion we believe that it should be retained.

Having raised this concern we do not, however, disagree with the substance of the argument noted in C28.

Short-term v. long-term objective. We concur with the FASBFV C1, (p. 27) statement that 'users of financial statements generally have agreed that that fair value information is relevant' for decision making. However, we are disappointed that the Statement (FASBFV, C12, p.30) does not express the need for all assets and liabilities to be measured at some form of current value, namely 'fair value. It notes: 'This Statement does not establish requirements for when to measure assets and liabilities at fair value'. These are to be specified on a project by project basis - and the likelihood of political factors dominating this becomes more likely. The current problems of a mixed system of accounting are likely to remain.

Issue 14, Public round table meeting on 21 September 2004.

Unfortunately, we are unable to attend due to professional commitments. We trust that our comments prove helpful.
References:

Chatfield, M., Development of Accounting Thought, 1977
MacNeal, K., Truth in Accounting, 1939:
A Common Genesis

General tinkering with replacement price values in Australasia has common origins with similar movements in Europe in the 1920s. Specification of current replacement values, reproduction costs and deprival values for public sector reporting draws heavily upon the use of concepts employed in the utility pricing debates in the United States during the latter part of the last century through the 1930s. Indeed, there are marked similarities in the politics of the current sector's current embrace of various concepts of replacement price as the infrastructure asset valuation base, and those of the U.S. utility debate from the Smyth v. Ames decision to the mid-1920s. This talk identifies the most notable of those similarities as it traces the entry of deprival valuations into the public sector in Australia and New Zealand.

Australasian Public Sector Monitoring

With one significant difference, the current push for valuing PTE assets on the basis of their assessed deprival value bears a remarkable similarity to the manner in which current replacement cost valuations first gained a foothold in valuation practice in respect of private sector enterprises. That one difference is a matter of direction—for whereas the original drift of ideas underlying replacement cost valuations was from a successful application in the utility pricing context to that of the non-utility companies in the U.S., the present drift has been from an unsuccessful application in the ordinary company context to that of the public sector utility entities. How the case for replacement cost valuations, promoted exclusively for one purpose, has drifted into an entirely different setting and has been presented as if it were the outcome of an evolutionary process, is repetitive. There is repetition also of the manner in which the theory underlying the development for its original purpose has been presented as if it were a development with the new setting in mind.
Current Cost in the U.S. Utility Fair Value Rate Base Context

Replacement cost valuations for utility asset valuations entered U.S. utility pricing formulae following the decision in Smyth v. Ames (1898), not as a basis for the financial reporting or determining of a utility's financial wealth and progress, but as one of the myriad factors to be taken into account in settling the pricing rate base. Current cost of replacing the infrastructure did not enjoy any primacy; it was one of many asset valuations and financial estimates to which consideration was to be given by the court in determining a fair value basis for rate setting; the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stocks, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute (Bonbright, 1937, p. 1086).

Thus conceived, the fair value rate base was neither entirely factual nor entirely conjectural. It is interesting to note that notions of current replacement and reproduction cost shared that dubious status, too: an "honest and intelligent forecast of probable future values", according to judgment in the 1923 Southern Bell Telephone case; such that 'can be established only theoretically ... when applied to property of a public utility, purchased under conditions which no longer exist, and to property ... that cannot be reproduced, it is not only theoretical, but highly speculative' in the Waukesha Gas Electric Company case; and in Glaeser's opinion (1927. p. 477), estimates thereof would be impossible of accomplishment 'without the aid of an Alladin's lamp'.

Unquestionably, both the notion of a fair value rate base and the ingredients comprising it lacked real world substance, something quite different from the commercial value and 'any value which businessmen have in mind when they decide upon a purchase' (Bonbright, 1937, p. 1086). Nowhere was this captured more eloquently than by Henderson (1920, p. 1051) in declaring that: 'The whole doctrine of Smyth v. Ames rests upon a gigantic illusion. The fact which for twenty years the Court has been trying vainly to find does not exist ... As a practical concept, from which practical conclusions can be drawn, it is valueless'.

Fair Value Drift in the U.S.

Although the context in Smyth v. Ames was pricing of utility services, the prices utilities were permitted to charge for their services were inextricably linked to measures of their financial performance. For the utilities, the trade-off between their monopolistic access to the market and the limitations to engage in non-utility activities was sustained by the utilities' financial capacities to exploit their continuation to provide the utility service at the prescribed quality. Financial capacity depended upon their financial performance, financial performance was a function of the prices the courts permitted them to charge, and the permitted prices were in turn a function of the agreed costs taken into profit calculations and the agreed denominator (the rate base) which entered rate-of-return calculations. Essentially, the financial performance of the utility was manipulated according to the court's perception of the wealth needed for the utility's continued operation, somehow moderated by an assessment of how the resulting rate-of-return and the prices which were necessary to achieve it meshed with the court's perception of the public
Parallel development of replacement price asset valuation schema in 1920s Europe, primarily by Fritz Schmidt and Theodor Limperg, were also in settings somewhat different from the environment affecting U.S. companies in the 1920s. Schmidt's Betriebswirtschaftslehre was a response to the ravages of hyperinflation on the financial statements of German companies and particularly on the indexation mechanisms which were not company specific. Schmidt's mechanism did not merely entail the incorporation of specific price changes in accounts, but also countenanced an indirect adjustment for price-level changes through targeted managerial policy. And Limperg's Bedrijfseconomie was not specifically directed at external reporting. Rather, it was the internal management accounting arm of his business economics system (Clarke and Dean, 1990).

Against that background in the U.S. up to the early 1920s and a backdrop of hyperinflation in post-World War I Europe, the arguments developed specifically for determining the rate base for utility pricing drifted into the growing US debate on asset valuation in the context of non-utilities. Interestingly, no similar drift occurred in the U.K., where a utility pricing controversy had not developed in a parallel manner, U.S. utilities and private sector corporations enjoyed several distinctions: the utilities had specific privileges and restrictions which governed their operations—generally, they operated with an exclusive right and obligation to provide a utility service (gas, electricity, water and sewerage) of a specified quality, for a specified period in a specified area, at a price which arguably provided for their ongoing capacity to do so. Essentially, the U.S. utilities were non-adaptive enterprises, existing only to undertake the specific services for which they were established. In contrast, the emerging ordinary U.S. corporation—the business enterprise par excellence according to Paton (1922)—was essentially infinitely adaptive, capable of entering whatever fields of commerce (other than those which were in the domain of the utilities) their managers chose, with no guarantee of market share, no court-approved pricing regimes, no contracted specification of product quality, and no obligation to continue in operation. A case for replacement price asset valuation drifted into a general case for asset valuation for ordinary accounting purposes of the adaptive private sector enterprises. Drifted, it appears more accidental than deliberately contrived. Virtually nowhere in the U.S. accounting literature mounting the replacement value case was there any justification for the recourse to the utilities' pricing literature. Nor, indeed, was there any acknowledgment of the special setting of the utilities' reference to replacement price valuations, their contiguity with the numerous other valuation bases and other factors stated in the Smyth v. Ames rate-base dictum, or any explanation of how the specific Symth v. Ames setting was reconcilable with the general purpose setting of accounting for the performance of ordinary companies.

Bonbright's Value to the Owner and the Deprival Context

Publication of Bonbright's The Valuation of Property (1937) and Hicks's Value and Capital (1939) two years apart was a significant coincidence in the background to the post-World War II pressure to introduce some form of current cost accounting. A selective recourse to Hicks's No. 3 ex ante concept of income as an authority for replacement price valuation of physical assets (Clarke, 1988, pp. 409-30) received a
notable boost from the equally selective recourse to Bonbright's exposition of value to the owner and the perceived authority it bestowed upon the replacement price case (Clarke, 1982, pp. 246-54). Again, contextual niceties were bypassed in the quest for a distinguished authority; for whereas Bonbright's context was the valuation of property of which owners had been deprived (by theft, fire, natural disaster, or expropriation for public use), Hicks's context was the calculation of the income of businesses not deprived of their property.

Bonbright's exposition referred explicitly to the principles enunciated in U.S. judicial proceedings determining the 'just compensation' to be paid to those who had lost, been deprived of, the access to and use of their property. According to Bonbright (p. 71): 'The Value of Property to its Owner is identical in Amount with the Adverse Value of the Entire Loss, Direct and Indirect, that the Owner Might Expect to Suffer If He Were to be Deprived of the Property'.

Value to the owner appears to have entered the accounting literature through engineers' concerns over the need to reserve funds for asset replacement (Burton, 1905; Matheson, 1910; Wyer, 1913; Martin, 1927) through depreciation charges against revenues. Notably, that arose in 1943 in a paper on depreciation bases presented by E. L. Grant (Stanford's Professor of the Economics of Engineering) at an American Society of Civil Engineers' symposium on the 'Fundamental Aspects of the Depreciation Problem'—the problem was the engineers' perceptions of difficulties attaching to maintaining productive capacity in times of rising prices. Grant drew on Bonbright's perception that the value (of property) to the owner generally reduced to its current replacement cost at the time of its loss, in support of his contention that depreciation ought to be based upon the current value of physical assets. Grant's paper was included in Solomon's Studies in Cost Analysis (1968), thus exposing accountants to the engineers' depreciation replacement fund doctrine.

Accountants' recourse to value to the owner has been noteworthy on two counts. First, those uses—physical asset valuation and income calculation for business entities not deprived of their property—were unrelated to the setting in which the concept had been developed and for which it had specific application, namely, assessment of compensation, financial indemnification, for individuals, business and non-business entities, in relation only to property of which they had been deprived. Similar to the recourse to the principles driving the utility rate base calculations, indemnification for property loss was treated as if it were a process analogous to that of conventional financial accounting and reporting. Second, recourse to Bonbright's value to the owner was, as in the utility case, pursued without due regard for the reservations implicit in Bonbright's explanation of it and explicit in the commentary of others. Accordingly, Bonbright's notion of deprival value was injected into the financial accounting regime in a manner far exceeding what could reasonably be described as a logical extension.

**CCA's Failure in the General Purpose Accounting Context**

It was not until the inflationary pressures in the mid-1970s that a general case for a full-scale introduction of replacement price accounting techniques for general-purpose reporting by ordinary companies was made. Faced with the prospect of high inflation, the British government appointed the Sandilands Committee to
enquire into 'whether, and if so how, accounts should allow for changes (including relative changes) in costs and prices'. After canvassing the perceived alternative mechanisms for incorporating the effects of price and price-level changes in accounts the committee recommended the introduction of a form of current cost accounting, in which calculation of periodic profits and losses was injected with the current replacement cost of inventories, depreciation based on the current cost of physical assets, and physical assets were to be reported in the balance sheet on the basis of their written-down value to the business--essentially their current replacement cost.

Similar proposals for various forms of CCA, in which adjustment only for changes in the current cost or replacement prices of assets featured, were presented in Australia (e.g., ASA/ICAA, 1976a, 1976b, 1978); New Zealand (Richardson, 1976); the United States (SEC, 1976); and Canada (Alexander, 1977). Clarke (1982) and Tweedie and Whittington (1984) detail those pronouncements.

Most importantly, whereas each of those initiatives underwent several iterations, none received unequivocal support from the respective national accountancy bodies as a means of general-purpose reporting and none received general support from members of the profession at large. The failure of CCA in the general-purpose context is well documented (Clarke, 1982; Tweedie and Whittington, 1984; Whittington and Pong, 1996). While some of that failure to receive general endorsement could be attributed to the decline in inflationary pressures during the early 1980s, it also might be perceived to be a recognition that CCA is not an appropriate mode for the general-purpose reporting of financial data which are serviceable for performance monitoring.

Extensions of Bonbright's value to the owner accelerated during the 1950s and 1960s. Consistent with the context of assessing the compensation for property lost, but inconsistent with the context of accounting for property currently in possession, accountants gradually emphasized the deprival aspect of Bonbright's definition. Merrett and Sykes were early to do so by explaining (1963, p. 466) that the value of a firm's property was the minimum or unavoidable financial loss an owner would incur by its disappearance. Wright (1965, p. 153) quoted Merrett and Sykes with apparent approbation, coining the phrase opportunity value to imply the least costly of the alternatives avoided by owning the assets. Baxter (1971) described the same notion as the deprival value ... the net outlay avoided by virtue of owning the asset. Thereafter, opportunity value (Solomons, 1966, pp. 127-31, though he used cost instead of value; Wright, 1967, pp. 74-5; Stamp, 1971, pp. 565-6; and implied by Sandilands, 1975, para. 209, p. 58; for example), and deprival value (for instance, Edey, 1974, pp. 75-83; also implied by Sandilands, 1975, para. 208, p. 58; Richardson, 1976, paras. 5.07-5.14, pp. 339-40; and Bromwich, 1977, pp. 242-5), were firmly embedded in the accounting literature relating to the general-purpose reporting by ordinary companies.

None of those expositions notes the provisos which Bonbright attached to his use of value to the owner. And while there is no compelling reason for anybody to be constrained by logical extensions missing from an original explanation of a concept, due notice of caveats should be heeded if the original exposition is being exploited as authority for extensions of it. Minimum or unavoidable and least costly were not
part of Bonbright’s definition—Entire loss, Direct and Indirect, was his prescription; nobody could be expected to settle for a compensation amounting to less than the actual loss sustained. Contestable extensions occurred at other points also: Baxter (1971,p. 36), for example, defined his deprivation value as the lower of replacement cost or ‘expected direct benefits’; yet Bonbright (1937) did not set expected direct benefits as a parameter. According to Bonbright, value to the owner meant that net selling price may often be assumed to measure the lower limit (p. 91), or the upper limit; or it could be that the value of property to its owner was its replacement price, or its selling price or some amount between these two figures (p. 92). Most significantly, he noted that his value to the owner is usually impossible to determine with confidence (p. 92). During the 1950s, 1960s and 1970s, the proponents of deprivation value did not suffer any such reservations. Paradoxically, whereas the pre- and immediate post-World War I debate (in the English language) on the use of current costs and replacement costs was almost exclusively an American phenomenon, the post-World War II debate (up to the 1960s) was predominantly between British accountants. And, whereas the 1920s fair value drift had been from the US utility rate setting context to that of the general purpose reporting by ordinary American companies in a setting in which replacement costs had been rejected as the dominant element of the fair value rate base, the 1980s/1990s drift of deprivation value was from the general purpose context in which it had been rejected for general-purpose reporting in Australia, Britain and New Zealand into the context of British Commonwealth countries’ utilities’ rate fixing and performance monitoring.

Transportation of Deprivation Value and Optimized Deprivation Value into the Australasian Public Sector Accounting in the 1980s and 1990s

A perception that public sector enterprises were neither efficient nor competitive presaged the big push for replacement price valuation of public sector infrastructure in Australia. That episode is documented in Walker et al. (1997). But it will be instructive to revisit some of it here, for it is the outcome of the preconditions which, as we have just outlined, emerged over a fifty-year period.

Impetus for the current push for replacement price valuations of public sector physical assets—infrastructure assets in particular—lies primarily in the perception that the public sector was performing poorly relative to private sector enterprises. Such comparisons were somewhat misplaced, for whereas a few public trading enterprises were in competition with private sector enterprises in the same industry, most PTEs operated in public service industries and the so-called natural monopolies (in particular water and cognate services). In Australia, in particular, threats that the Commonwealth government was entertaining reductions of the states’ shares of the income tax pool spawned the state governments’ moves to make the PTEs more commercial. Underlying the commercial high-ground approach being presented to the public at large were the state governments’ moves to top up their treasuries with compulsory dividends from their PTEs. Walker et al. (1997) note three phases of the commercialization movement: first, the publicity given to the alleged poor performance of the PTEs; second, injection of written-down replacement values in the PTEs’ accounts; third, formal implementation under an Australia-wide state government edict that replacement price values, and their rebadging as deprivation values, be the official PTE asset basis.
Each of those phases was against a background of increasing government rhetoric that privatization of key PTEs would introduce the necessary commercial edge perceived to be missing. Of course, fiscal pressures world-wide were the catalyst for governments to support their treasuries through privatization—in Australia the Commonwealth Bank, Qantas and Telstra have been privatization targets. At the individual state level the water and sewerage, and the electricity generators and distributors, have been either corporatized or privatized. In New Zealand, electricity has been a prime corporatization and privatization target.

Rhetoric regarding PTEs' low rates of return compared to those of private sector companies highlighted the first phase. In 1982 the Victorian state government developed rate-of-return reporting guidelines for its PTEs. In its Department of Management and Budget (1986, p. 8) it explained that the government aimed to achieve an annual target real rate of return on assets of 4%, that PTE assets were to be 'measured' at 'written-down current value of assets-in-service', and that after deducting liabilities the public equity was to be the base for annual dividends of up to 5 per cent (similar, it is to be noted, to the U.K. targets; see the 1996 Report of the Independent Pricing and Regulatory Tribunal of New South Wales). The state of Victoria somewhat led the current value push—accordingly, for the financial years after 30 June 1986 many public authorities presented supplementary current cost statements designed to facilitate rate-of-return monitoring in keeping with the developing guidelines.

New South Wales spearheaded the second phase following the election of a Liberal (conservative) government. Particularly notable was the initiative to classify government agencies on the continuum—'government service' through 'commercial businesses' to 'commercial enterprises'. Upwards asset revaluations to reflect current values accompanied a new regime of rate-of-return monitoring and in compliance with N.S.W. Treasury guidelines that all the state agencies revalue assets at a 'current cost valuation measured by the lowest cost at which the service potential or future economic benefits of the asset could currently be obtained in the normal course of business' (N.S.W. Treasury, 1989, p. 9). Thereafter the N.S.W. PTEs undertook an undisciplined process of revaluations which witnessed massive oscillations in asset values, revisions upon revisions until, it seems, something like the 'right result' was achieved. Of course, underlying the PTEs' anxiety in that environment was the manner in which the upwards revaluations worsened their rates-of-return giving them the appearance of being even more relatively inefficient that originally alleged.

On that point Walker's (1993) analysis of the relative performance of PTEs and private sector enterprises is to be noted. It does not appear to have been realized by the commentators on the issue that the financial basis of the private versus public sector comparison was fundamentally flawed. For, whereas the PTEs were being assessed on the basis of the current costs of their assets, almost without exception the private sector enterprises had historical costs embedded in the denominator of their rates of return; and whereas the PTEs were row charging depreciation on the basis of the inflated current cost valuations, the private sector enterprises were injecting amortization based on historical costs. Recalculating data for the water industry so that they 'conformed with private sector accounting treatments', Walker found that the Australian water industry PTEs returned 15 per
cent on equity compared to the 9.4 per cent by ASX listed companies, earnings before tax of 12 per cent compared to 7.4 per cent, and had an earnings before tax as a percentage of sales of 44 per cent compared to the 9.5 per cent by the ASX companies. He also found that pre-tax and interest earnings per employee in selected water and electricity PTEs individually ranged from a multiple of three to five those of the average ASX-listed companies. And, whereas the inherent fragility of conventional private sector accounting treatments is to be noted and might well make Walker’s data contestable, it even more so exposes the futility of the analyses of the data relied upon by those promoting the perception of the PTEs’ relative inefficiencies.

In New Zealand the State Owned Enterprises Act transferred the assets of the electricity sector to Trans Power in 1994 on the basis of an established fair value as part of a large-scale corporatization process. The N.S.W. and Victorian state governments were planning similar projects (N.S.W. Pricing Tribunal Report, 1996, pp. 26-31).

A special meeting of Australia’s state premiers in 1991 engineered critical developments in the PTE push towards current cost valuations. A national approach to PTE performance monitoring was agreed and a task force established to prepare a checklist of performance measures—‘current (market) value’ was the task force’s preferred basis for the measurement of ‘the assets of government’ and a Steering Committee on National Performance Monitoring of Government Trading Enterprises was set up under the Commonwealth’s Industry Commission to develop the performance-monitoring regime. The Committee’s Guidelines on Accounting Policy for Valuation of Assets of Government Trading Enterprises: Using Current Valuation Methods (1994) formally prescribed CCA the preferred current value method for public sector asset valuation and rebadged CCA as ‘deprival value’, picking up on the way the salient Bonbrightish feature, ‘loss that might be expected to be incurred ... were that entity deprived’, and noting that ‘in most cases [deprival value] will be measured by the replacement cost of the services or benefits currently embodied in the assets’. Thus the Committee also embraced the Solomons’ matrix, the (deprival) valuation depending upon whether the asset was to be replaced. Renewals accounting for infrastructure assets (which had some support in the U.K.) was prescribed.

Deprival value was given a further gloss in New Zealand. Drawing upon ideas (if not the name) in the 1986 U.K. Byatt Report, optimized deprival value was deemed to be the relevant concept; essentially, the ODV was to be an estimate of the current cost of the infrastructure assets required to produce the current (normal) output of a PTE’s services (New Zealand Ministry of Commerce, 1994a, 1994b). ODV might be seen to be similar to the renewals accounting proposals of the 1920s (Bonbright, 1937; Clarke, 1982). Essentially, the objective of ODV is to quarantine the excess capacity from the infrastructure valuation and pricing base. In Australia (and elsewhere, it appears) pricing through rate-of-return mechanisms based on denominators which included the costs of excess capacity has been a problem.

In Australasia, Australia in particular, those events have proceeded before a backdrop of political intervention to replenish the public purse: by driving arguments for corporatization and the ultimate privatization of public sector enterprises which...
draw upon a perceived inefficiency in the public sector, to promote accounting mechanisms which provide data supportive of compulsory dividend payments to state treasuries; and to evoke an illusion of a strict PTE monitoring regime.

Nowhere has that been more evident than in the work of the National Competition Review (chaired by Professor Fred Hilmer from the Australian Graduate School of Management), which also emerged from that 1991 Premiers' conference. The Hilmer reforms are to be implemented by the Steering Committee on National Performance Monitoring of Government Trading Enterprises. Whereas DV and ODV have a prominent place in the committee's monitoring regime, it is unclear whether they are measuring up to expectations. By 1995 the asset valuation rules had received wide dissemination, and the committee's 1996 report confessed its view that discontinuities in the data made comparisons 'infeasible'.

It appears that deprival value and optimized deprival value are now in the early stages of experiencing the disenchantment in the public sector that current cost accounting received in the private sector twenty years ago. Clearly those who have promoted the drift of both DV and ODV into the public sector have either not heeded that experience with CCA, DV and related concepts in the private sector, or did not know of it. If it is the former, then the public sector accounting reformers must be considered to suffer a certain lack of candour. And if it is the latter, they might reasonably be accused of lacking the efficiency and effectiveness they claim to hold so dear!

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APPENDIX II

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WANTED: FOUNDATIONS OF ACCOUNTING MEASUREMENT

Key words: Accounting; Foundations; Measurement

INTRODUCTION: 1997

From time to time for over 150 years pervasive flaws in accounting thought and practice have been brought to notice. The principal focus of attention has been the almost limitless array of valuation (or quantification) rules that have emerged under the widely fostered view that each mercantile firm may choose (and vary, as it pleases) the combination of rules that its accounts will follow. For the past seventy years professional and regulatory bodies have affirmed the desirability of 'reducing the variety' of those rules. But time after time the task has been shirked—to the point where one of the latest major exercises simply averred that five different valuation bases (called 'attributes') are used in present practice, and their use was expected to continue (FASB, 1994/5, p. 151).

But to return to the immediate antecedents of WANTED: Foundations of Accounting Measurement. In 1966 was published A Statement of Basic Accounting Theory (ASOBAT), prepared by the Committee on Foundations of Accounting Measurement of the American Accounting Association (AAA; 1966). This, surely, was a proper place to deal with the logical conditions of aggregation and relation—and measurement generally. But, like most other products of committees and boards in the U.S. and elsewhere, ASOBAT had little to say about accounting as measurement. Perhaps the 'Foundations' committee was set up to make good that oversight; for, if accounting could be shown, by argument and illustration, to be an exercise in measurement, nonsensical, superfluous, mutually contradictory rules could be eliminated.

The Report of the Committee (AAA, 1971), however, promised none of these things. The critique here reproduced verbatim was submitted to The Accounting Review in August 1972. Publication was declined. One copy of the manuscript was returned to the author with copious notations by way of objections by the referee, who, by use of the authorial 'we', appeared to have been a member of the Committee. Among the notations were the following:

ungentlemanly, inferential and flagrantly misleading ... ridiculous and michevious [sic] prattle ... The writer is either a quixotic dreamer or a heavy handed collectivist ... Raving of a literate and ignorant word-jockey ... the writer has distorted wholly out of context the spirit and conclusions of the report to suit his own purpose of mounting a gib, attention-getting attack on a major committee report ... I'm tempted to recommend publication of this student's paper despite its many misrepresentations, flaws of exposition, emotional hostility to the Committee, and minor goofs. Someone should come along behind it, though, to clean up the mud it will sling around.
Whatever flaws the critique may have had could not match this for venom. But, that apart; rejection of the critique forestalled open debate; reinforced the use of guesswork magnitudes (e.g., discounted net cash flows) in accounts of the past; fostered the erroneous addition of past, present and future magnitudes; set a pattern of disregard for the far more disciplined examination of measurement to be found in other fields; and did nothing by way of reducing the diversity of valuation rules tolerated in present thought and practice.

Now, over twenty-five years on from the Report; similar exercises have been initiated in the United States, Canada, Britain and Australia, all on the same pattern and all exhibiting the same disregard for the mathematical and practical constraints respected in every other field of disciplined endeavour.

The rules of the game have been laid out at length in my 'Metricial and Empirical Laws in Accounting' (1991). But will they be noticed in any resulting professional discourse on measurement in Australia or elsewhere? Or will it still be possible to say: Wanted: Foundations of Accounting Measurement?  

**CRITIQUE: 1972**

It might have been hoped that the Committee on Foundations of Accounting Measurement of the American Accounting Association (AAA, 1971) would have produced some conclusions in the nature of foundations; something of an elementary kind which might provide the groundwork for more elaborate or more sophisticated exercises. Its report is disappointing. It ranges over an almost limitless territory. But it finishes almost exactly where it started: 'New guidelines are desperately needed ... The lack of new guidelines for accounting is the most serious problem to be faced' (p. 48). But worse than the failure of the Report to give direction is its potential for misdirection.

The Report begins with an 'adopted' definition: 'accounting measurement is an assignment of numerals to an entity's past, present and future economic phenomena, on the basis of observation and according to rules' (p. 3). This, as we shall show, is complicated and vague enough. But it is made even more vague by the following sentence: 'Under this definition, it should be pointed out, the rules employed need not be good ones and observations made need not be correct to qualify as accounting measurement'. Freed from the need to employ 'good' rules for assigning numerals and from the need to make 'correct' observations, apparently any numbers that masquerade as (look like) measured magnitudes will qualify as accounting measurement. That, of course, is the standard recipe for the success of fraudulent misrepresentation, as any reader of the history of commercial fraud will know.

But return to the definition. It allows that accounting measurement includes the assignment of numerals to an entity's past, present and future labour turnover, market share, unfilled orders, total labour force and many similar things; for, as well as I can judge, these are all economic phenomena of an entity. Yet none of them falls within the only two types of accounting system, 'equity accounting' and 'operational accounting' (as they are commonly understood), contemplated by the Committee. The definition allows also that accounting measurement includes the assignment of any kinds of numerals. But the knotty problems which confront accountants concern themselves with the assignment of numbers of dollars, not numerals at all. As I understand it, the object of a definition is to limit the scope of usage of a term so that one can come to close grips with it and make good use of it, as of a fine tool, for the purpose in hand. But the Committee's definition is so open, it provides so many things to talk about, that we should not be surprised if it comes to close grips with none of them.
Properties, Scales and Units

It would have been instructive if the Committee had begun with a discussion of measurement simpliciter. It is true that most of the discussions of measurement occur in the context of particular branches of science. But they have sufficient elements in common to justify some general specifications of the object and process of measuring.

In the first place, every particular measurement scheme requires the specification of the property of a class of objects which it is of use and interest to measure. The Committee, almost as an aside, alludes to what might have provided such a specification: 'accounting is indispensable in measuring and reporting organizational wealth and its changes' (p. 7). But the point is not developed. What wealth is, how it is measured and how changes in it are measured are not discussed.

In the second place, every measurement scheme requires the specification of a scale of some kind which makes it possible to distinguish the extent to which every object in the class possesses the specified property. At least some important contributions to the literature of measurement distinguish ordinal scales, interval scales and ratio scales. These scales (or rather measurements taken in them) have different mathematical characteristics. As the addition of measures is so common in accounting processes, it is necessary to consider the conditions under which addition (and other forms of relation) are mathematically permissible—and in fact to stipulate the kind of scale which is appropriate to accounting. Nowhere in the whole Report is there any discussion of scales of measurement.

In the third place, every measurement scheme requires the specification of a unit in the scale, and the conditions under which unit measurements shall be deemed to be of equal significance. In brief, this requires specification of the meaning of the 'standard' unit. This is necessary since measurements may be taken in a variety of non-standard situations, such that the raw or crude measurements are not comparable or admissible. Nowhere in the Committee report is there any discussion of the unit of measurement, either in general terms or in the terms appropriate to accounting measurement.

Kinds of Measures

One of the great advantages of measurement schemes is that they make possible the development and use of notions other than the simple ostensible properties of particular objects or collections of objects. Sums, averages, proportions and such notions as area, density and velocity are examples. The Committee Report touches the fringe of this 'extended' field of measurement. It distinguishes between primary measures (direct measures of properties directly measurable) and secondary measures (derived by 'algebraic transformation of a set of numbers which are direct measures of some objects or their attributes', p. 20). But the discussion is both inconsistent and incomplete.

Consider first a significant inconsistency. Among the examples of primary measures are counts of physical quantities, and prices of non-monetary goods. In respect of prices, it is said that they may be past, present or future prices (p. 20). No such stipulation is made in respect of physical counts. Either, therefore, counts and prices are not members of the same class of measures (i.e., primary measures), or both should be treated in the same way (i.e., it should be allowed that physical counts may be past, present or future counts). Did the Committee shy away from speaking of a 'future count' as a measure at any present time? If it did, it followed the course of common usage and commonsense. It is just not possible to count any future physical quantity, in the sense in which 'count' is customarily used. Recall that the definition of accounting measurement referred to 'the assignment of numerals... on
the basis of observation and judging future rules. That can be no observation of a future quantity of things. And for exactly the same reason there can be no observation of a future price.

In defence of the Committee it might be said that the phrase 'according to rules' may be construed so as to include the derivation of future prices on the basis of observed past and present prices. But, on the one hand, there are no rules by which a certain future price may be derived from observed past and present prices. And, on the other hand, if there were any such rules they could as easily (or more easily) be applied to future physical quantities. Hence the inconsistency in the exposition of the Committee would remain. But in any case, the Committee gives no treatment to the meaning to be ascribed to the phrase 'according to rules', nor is any independent writer on measurement cited as authority or support for the idea that 'rules' includes rules for prognosticating any future quantities. Indeed, if future quantities and prices were as firm and reliable as past or present (measured) quantities and prices, the whole problem of uncertainty would have been swept away!

The inconsistent, lopsided or asymmetrical treatment (with respect to time) of physical quantities and prices appears to be an attempt to force unlike operations and results into one class of things on the ground that the elements of that class have 'numerals' in common. It is not unlike the fallacy of concluding that \( 2 = 4 \) on the ground that \( 2 \times 0 = 4 \times 0 \). But the incompleteness of the discussion of primary and secondary measures is even more serious.

Secondary measures are distinguished from primary measures on the ground that the former are derived by algebraic transformations of direct (primary) measures. Now, in the first place, algebraic transformations are only permissible (or mathematically legitimate) under certain conditions. Measurements taken on scales calibrated in different units may not be added without first converting them to measurements in a common scale. Pounds sterling may not be directly added to pounds Israeli; nor dollars U.S. to dollars Hong Kong. Measurements of different proportions of a set of objects may not be added. A measure of height may not be added to a measure of weight, obviously. But neither may the selling prices of some objects be added to the purchase prices of other objects, if it is expected to obtain some aggregate pertinent to any financial calculation or negotiation. It is not necessary to go more fully into the mathematical conditions under which aggregation and relation are permissible. These two examples will suffice to indicate the incompleteness of the exposition. For, at one point we are told that a 'summation of numbers in different units' is a (secondary) measure (p. 21); though what such a summation be 'a measure of' is inconceivable. And at no point is any question raised about the legitimacy of many traditional accounting operations, such as adding market prices and cost prices in balance sheets. And nowhere at all is there any hint of a discussion of the universally known fact that monetary units, in which all things presently considered as accounting measurements are expressed, do not have the same significance from year to year. A report on the foundations of accounting measurement can scarcely be expected to get far when it disregards the most elementary rules governing addition and relation.

In the second place, the Report makes no mention of an important class of measures which the Committee might describe as secondary measures, but which others have described as derived measures. Examples are the current ratio, the debt to equity ratio and the rate of return. These are widely accepted as measures of liquidity, leverage and efficiency, respectively. Perhaps the Committee did not consider these to be secondary measurements. But it did aver that 'the significance of numerals reported in accounting is solely their significance in reaching economic decisions' (p. 23). There can surely be no doubt that the above-mentioned ratios are used in making economic decisions. It is therefore quite pertinent to inquire into the conditions under which, say, a measure of current assets may be related to a measure of current liabilities if an indication of solvency is sought. As current
liabilities are amounts to be paid, the measure of current assets should surely represent what is available, in money or approximate money's worth, to pay off those liabilities. Now, observe this: no valuation of inventory at cost, or at the lower of cost and market, or at LIFO, can give any indication of the money or money's worth available to pay off any debt; and no valuation of marketable securities at cost can give any such indication in respect of those securities. Here is a quandary. To make decisions (at least some decisions) a measure of solvency is sought; but the numbers commonly reported do not enable a properly informative measure of solvency to be derived. Is something wrong with the numbers, then? Yes, indeed. They are not numbers which have 'significance in reaching economic decisions'. In fact, a number (of dollars) representing 'lower of cost and market' or 'LIFO' is not a measure of any describable property of an inventory.

This kind of analysis could be extended to the other ratios mentioned, or to other aggregates and differences such as net income—with exactly the same conclusion. But the Committee makes no such analysis and reaches no such conclusion. Why? For no apparent reason, other than perhaps a determination to consider as a measure or a measurement any number which does or could now turn up in an accounting statement or calculation. It might have been expected that a discussion of such an exacting exercise as measurement would itself be exacting, would discriminate between what are measures and what are half-breed or mongrel numbers posing as measures. But the Report gives no satisfaction in this respect.

**Measuring and Quantifying**

The Committee plays fast and loose with the term 'measure' when it comes to deal with 'retrospective, contemporary and prospective measures'. It is conceivable that one may seek to quantify a particular property of some former but now nonexistent object, and to quantify a particular property of some (expected) future but not yet existent object. The question is, whether such quantifications can properly be described as measurements. This may seem to be an arid question, a matter of splitting hairs. But its importance lies in the freedom or constraint with which numbers purporting to be measures may be added and otherwise related.

The operation of measuring, in the simplest of cases, entails the establishment, by observation, of correspondence between the magnitude of a property of an object and a particular point on a calibrated scale which is designed to represent various magnitudes of that property. Length and weight (or mass) are so measured. Typically the measurer does not invent the scale or the instrument of which the scale is a part. He makes use of the conventionally accepted scale and the appropriate instrument or process by which correspondences between the observable and the scale are established. He must, of course, use the measuring instrument in the way in which it is used by 'competent' measurers, that is to say, by persons familiar with the instrument and familiar with the manner in which measurements so made can profitably be used.

Even in these very simple cases of measuring it is possible that 'readings' may be taken which are not measurements, but mistakes. If the zero point on a measuring rod is not at the very end of the rod, to apply the end of the rod to one end of an object whose length is to be measured will result in a mistake, not a measurement. If a physical balance is not properly adjusted before setting about to find the mass of an object (or if the butcher puts his thumb on the object pan) the result will be a mistake (or a fraud), not a measurement. If one learns that the volume of an object may be found by immersing it in a calibrated tank containing a liquid, and then goes through all the necessary steps except seeing that the object is fully submerged, the result will be a mistake, not a measurement. These may seem trivial examples. But each of them illustrates the necessity of following strictly the rules for
measuring properties by specified instruments. Each of the improper operations described enables the observer to assign numbers, or numerals— but it would be fatuous to describe these numbers as measures or measurements.

For exactly the same reason, it would be fatuous to describe as a measurement of the aggregate length of a set of objects the sum of the separate lengths of the objects, if some of those lengths were measured according to the proper rules for measuring length and some were not. Now, apply the same test to one aspect of accounting. The Committee notes that 'accounting repeatedly has been regarded as the theory and practice of measurement of income and wealth' (p. 47); and apparently it endorses this view. It does not say how wealth is measured, so we must construct some notion of this. If a man has $10,000 in cash only and has no debts outstanding, we would say his wealth is $10,000. But if he has $5,000 in cash, some bonds for which he paid $5,000 but which now stand at a 40 per cent discount in the market, and if he has no debts outstanding, we would not say his wealth is $10,000. We would say it is $8,000; for wealth, in terms of money means how much a man can now spend if he wishes. It would be foolish to say his wealth is $10,000 in the latter case, because that figure is the sum of two figures representing quite different 'properties' of the cash and the bonds. Long ago Canning (1929, p. 319) pointed out that 'the balance sheet valuations of accountants are of mongrel origin' and that diverse valuations of diverse things are added to find an asset total that, dollar for dollar, cannot have a common significance. In effect, Canning asserted that scarcely any two amounts representing asset classes in a balance sheet can be added, legitimately, to obtain a measure of the wealth of an entity in respect of those classes; and a fortiori a balance sheet total for assets cannot be taken as a measure of aggregate wealth. And he backed up his case with a clear identification of the diverse valuations of which he spoke. Curiously, one may read the whole of the Committee's report without getting a hint of the problem to which Canning and Sweeney and others have so sharply drawn attention. Curiously, we say, because the problem is an elementary or fundamental measurement problem. It follows that, although accounting may be regarded as 'the theory and practice of measurement of income and wealth', accounting as it is done is not in fact an exercise in the measurement of wealth and income at all. For just as mistakes may be made in the simplest acts of measuring, mistakes may be made in the measurement of income and wealth. It is a mistake to consider the cost of an asset as a representation of or measure of the wealth (or part of the wealth) of its owner. And if mistaken representations of wealth are made at successive dates, the increment in wealth (income) during the interval will not be properly represented. The Committee apparently does not see these things as mistakes. Yet they are just the kind of mistakes which have led to the bankruptcy of many and to the costly litigation and settlements which have fallen on many professional accountants in the recent past.

Now, to quantify the elements of a future state is an exercise far more complex than the measuring of a property of a single object or the measuring of the property aggregate of a collection of objects. First, at least some of the elements of a future state are not yet existent. No number can be assigned to any property of those elements on the basis of observation. And, second, the elements of a present state which are expected to be elements of the future state will undergo changes in the interval. No number can be assigned to the magnitude of these changes on the basis of observation.

The Committee may protest that these objections overlook the phrase 'according to rules' in the definition of measurement. We have already hinted that the reference to 'rules' relates to the rules for measuring observable objects. But the Committee would have us believe that 'there exists an extensive and well-founded body of theory concerning how to make prospective measurements' (p. 29). This is hard to believe. For, if the body of theory (whatever it is) is well-founded, one would suppose that those who know it would be perennially successful; they would never err, since they would know the future as well as they know the present. Needless to say, the Committee gives no example of such
omniscient paragons. Furthermore, if there were such a body of rules for making prospective measurements, it would be expected that all competent 'measurers' would reach the same conclusion approximately about the size of some prospective magnitude; for they would only have to apply the rules to the already given past and present measures to obtain the result. But it is notorious that those who attempt to quantify future magnitudes may obtain vastly different results, as well as results which differ materially from what the magnitude turns out in due course to be.

The Committee, however, seems to have been so anxious to thrust 'future measurement' upon us that either it devised some mistaken argument to support its case or failed to see that its arguments contain non-sequiturs. Thus: 'by the time the estimator has reacted to a present thermometer reading, that reading already is slightly in the past; yet one uses it to estimate present temperature. Therefore even when one measures present temperature, there is a slight element of futurity in the measure' (p. 29). Note the 'therefore', signifying a conclusion or inference from the previous sentence. But the previous sentence says nothing about the future. The conclusion or inference is a non sequitur. Some pages later the Committee felt it necessary to reinforce the point; for 'some may feel uneasy about speaking of forecasts as measurements' (p. 46). The Report cites five authorities (two of them members of the Committee), none of which, in the passages quoted, gives any ground for regarding future magnitudes as measurements. It then asserts that every measurement is 'a process of estimation', 'that the difference between measurement and estimation as used in common parlance is, from a scientific point of view, merely a matter of degree' and that "estimation" usually refers to measurement with a comparatively high range of error. The (subtle) transition from measurement to 'estimation with a high degree of error' opens the way to including magnitudes of anticipated events in 'estimates with a high range of error'--at least so it seems. For, hey presto! 'Accordingly' the Committee's definition of accounting measurement could include reference to future magnitudes (p. 47). But the whole of this rests on the treatment of an estimate of a present magnitude and an estimate of a future magnitude as if they were the same in kind. They are not. Epistemologically, that is, in terms of what we are entitled to assert that we know, the two types of estimation are very different in kind. Again, the Committee's conclusion rests on a non sequitur.

Equity Accounting and Operational Accounting

Early in the Report the Committee distinguishes between 'equity accounting' and 'operational accounting'. Even at the outset it is not clear in what the difference subsists. It is said that equity accounting is 'aimed at reconciling the equities of shareholders and other interested parties' while operational accounting is 'aimed at providing useful information for management and investor decisions' (p. 3). Since the class of persons who are investors includes the class of persons who are shareholders, and since shareholders as investors make decisions with the object of protecting or advancing their interests or equities, there seems to be little substance in the distinction, as far as the principles of measurement are concerned. There may, of course, be differences in the amount of detail which will be serviceable to managers and shareholders. But this does not entail any difference in the rules of measurement appropriate to the two kinds of accounting--if there are two kinds.

The Committee thinks otherwise. 'Although the objects of measurement in operational accounting are in many cases the same as those in equity accounting, the orientation and the methodology of measurement are quite different' (p. 11). Just what does this mean? If a manufacturer of tables makes thirty inch by fifty inch tables, is the 'orientation and the methodology of measurement' different for him and for the buyer of tables? One would suppose that the measurements, as measurements, mean exactly the same to both parties and would be taken by exactly the same processes or methods by both parties.
The Report later reopens the discussion of the matter with the 'balls gambit' (p. 33). This is a very curious exercise, unlike anything which businessmen, investors and accountants do. Players A and B draw balls; in turn, from two urns; the drawer of the heavier ball in each round gets the greater part of the fixed payoff for each round. There is an Equity Accountant, who seems to be a referee or judge. He weighs the balls drawn by A and B, 'using a somewhat imperfect scale' for the purpose. Due to the inaccuracy of the scale, Equity Accountant is allowed to adjust his reading of the scale as he thinks it necessary. His announced result determines the payoff to A and B. A engages Operational Accountant who, using another imperfect scale, weighs the balls A draws with the object of discovering whether or not the balls in one urn are, on average, heavier than the balls in the other urn; for it would be 'more profitable' to A to draw balls from the urn containing the heavier balls. But why would it be more profitable? Equity Accountant may, in fact, adjust his readings in any way at all 'if he thinks it necessary'. Because the two 'accountants' use different scales, both imperfect (and as far as we know imperfect in different ways or in different degrees), A has no way of telling whether Equity Accountant is biased, or whether his 'adjustments' are random, or how great or small the 'adjustments' are; for A has no access to B's balls. A would be foolish to base his decision on what his Operational Accountant could tell him.

Now, notwithstanding the facts that both accountants use imperfect scales and that Equity Accountant may adjust his readings if he thinks it necessary (no grounds specified), the Committee says that both accountants 'provide information on the weights of the balls'. Surely they do not. All the so-called information is misinformation; and the payoff is based on 'fiddled information'—'the number which Equity Accountant decided to choose' (p. 34). There may be such crazy games and crazy players. But where there is no standard measuring equipment, anything can happen. That's not a game, but a gamble. And the exercise throws no special light on problems of measuring.

But it is necessary to the conclusions which the Committee expects us to accept. For, first, we are told that a shareholder can 'enjoy the benefit of the company's financial accounting system [equity accounting]' even without reading a single word of its financial reports (p. 34). This alludes to the payoff in the form of dividends. But it completely disregards the financial reports as a source of information leading to investment in a given company and to disposal of an investment when other and better opportunities present themselves. The Committee's investor is completely passive—the stock exchange is out of business!

And second, we are told, in respect of equity accounting, that

a measurement process which is completely arbitrary and useless for any decision can be very useful if the parties agree to base the determination of their equities upon it ... apples can be added to oranges, pound for pound, if all interested parties agree to distribute the payoff. Theoretically meaningless allocations of costs and revenues can also be done and in some cases must be done in order to distribute the payoff. (pp. 34-5)

There is confusion and misdirection in abundance here.

To suggest that a completely arbitrary process is a measurement process is offensive both to commonsense and to the Committee's own definition, which says 'according to rules'. We cannot have it both ways. Either measuring is non-arbitrary, and all arbitrary quantities are not measurements; or any old thing can be a measurement, and you, reader, could be fifty-seven feet tall. Next, to suppose that parties who divide the payoff would agree to accept a completely arbitrary method of determining the payoff is beyond reasonable belief. If they must put up with such a process and the result, they do so in ignorance of any way of improving their lot—not because they voluntarily and knowingly agree with the process. Next, to speak of the distribution of apples and oranges, 'pound for pound', misconstrues the
problem to which the Committee alludes. A dividend when paid does not consist of a mixture of anything—every shareholder receives homogeneous dollars from any given distribution of dividends. What, in fact, is done in conventional accounting is calculate a net income in which, to use the Committee's analogy, a pound of apples is not the same pound weight as a pound of oranges. The problem of mixing different dollars is thus evaded by misstating what occurs. Next, there is no reason whatever for saying that 'meaningless allocations ... must be done' in order to distribute the payoff. One of the reasons for looking at accounting as an exercise in measurement surely is to produce some refinement in its processes, to substitute something exact, or more exact, for arbitrary allocations which are not measurements. There can be no 'musts' about 'meaningless allocations'; what is meaningless should be weeded out of any set of practices which purports to represent what has occurred. Indeed, the Committee itself seems to acknowledge this in the next paragraph of its Report, where it says 'arbitrary allocations are to be discouraged for any economic decisions, including investment decisions by stockholders and potential stockholders' (p. 35). Now, as equity accounting yields the reports which are made available to stockholders, this remark is in direct contradiction of the spirit of the earlier remark that meaningless allocations are permissible, if not mandatory, in equity accounting. There are indeed grounds for believing that the quality of the factual (measured) information which managers use must be the same as the quality of the factual information which investors and others use. A company is not completely independent of its stockholders and other financial supporters. It must maintain its solvency and a rate of return which, by comparison with other companies, justifies the continued belief of investors in its economic viability. If its principal financial features deteriorate, its management must take steps to restore them. By this we mean substantive steps; not the kind of steps which some seem to take—such as changing the accounting rules used (i.e., resorting to arbitrary devices and figures) to bolster the reported results and position. It should be clear that no conclusions can be drawn from 'internal' (operational?) information which will lead to an improvement in the externally reported (equity accounting) information unless the two classes of information are the same in kind, of the same quality, mutually consistent. The Committee apparently has never tried to convince a traffic officer that the speed limit was not being exceeded on the ground that the driver's 'operational information' is all that should be used in deciding the matter. Let them not try: it won't work.

In Sum

We have by no means exhausted the points at which issue may be taken with the Committee's report. But sufficient of such points have been noticed to put in serious doubt its nature and the Committee's intention. Let's recapitulate.

- There is no clear stipulation of the financial 'properties' of objects and events which decision makers (managers or investors) can properly use to make judgments about particular companies or to make legitimate comparisons between companies.
- There is no discussion of the kind of scale in which the extent of the possession of any such property by any object may or should be assessed.
- There is no discussion of the unit in which measures of financial properties are or can be expressed; and there is no discussion of the mode of measuring when the unit used at any particular time is different in significance from the unit used at a different time.
- There is inadequate discussion of the variety of measures of financial characteristics used in practice—the subaggregates, aggregates, ratios, and percentages so commonly derived and so obviously relevant to decisions or choices. The inadequacy is crucial, since there are quite definite conditions under which aggregation and relation are legitimate and their results informative. The report is perhaps more in the nature of a polemic than a survey, or an exploration.
- The whole problem of the monetary unit is evaded. On the one hand, the definition and other parts of the discussion refer to 'numerals', when in fact numerals of themselves mean nothing.
And, on the other hand, in the whole Report there are only one or two places where 'dollar' and dollar signs occur, and then never in proximity to 'measure' or 'measurement'.

- By recourse to the notion that an arbitrary numeral can be a measure or measurement, it is implied that the quantities of dollars which are assigned to things in balance sheets are necessarily measures. Apparently we must not ask whether any quantitative statement is a measure (or a measurement); it is, ipso facto—or so the Committee would have us believe.

- The Report tries hard to make stick the idea that we can measure a future (nonexistent) thing. A little juggling with 'estimate', in the sense of approximate quantification of an observable, turns it into estimate in the sense of prognostication. There is, of course, evidence aplenty of mistaken, loose and metaphorical uses of 'measure'. But, if we value logical rigour, as the Committee says we should (pp. 5, 37), we should take care to distinguish these usages, rather than lump them all together as if they were the same. A future quantity may be a useful figment of our disciplined imaginations. But it is not an observable—and hence, according to all writers who associate measurement with observation, it is not a measurable.

- The Committee works hard to justify the notion that equity accounting and operational accounting yield 'measures' which are different in quality and necessarily different. But the argument cannot be sustained; if even a few examples had been used involving money figures (instead of the balls gambit), it would have been apparent that the postulated differences would lead to gape in the chain of inferences by which optimal courses of action are chosen.

With one observation of the Committee we can certainly agree: 'New guidelines are desperately needed ...' (p. 48). Still.

REFERENCES


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