AMQ INTERNATIONAL
STRATEGIC ASSET MANAGEMENT

For Practitioners, Policy Makers and Planners in Public Infrastructure

Track Asset Management History with our new Website - www.amqi.com "Mark 1V"

For 25 years I have been working in, developing and writing about asset management. In this time Asset Management has made a few wrong turns, taken a few detours, but overall made great progress.

Today, as we launch our 4th website, we make available to all subscribers, every SAM issue that has been published since fortnightly publication in 1999. Accompanying this is the first of our new feature 'Themes': these are illustrated topic bibliographies that track the history of key topics since 1999, linked to the articles that discussed them. The first three Themes are "Asset Information", "Asset Management Plans" and "Benchmarking". See what twists and turns we have taken in the last 8 years!

By 1999, however, some issues had been 'talked out', problems solved, directions decided. The choice of Historic Cost or Current Value is one such topic. As time permits, these older issues will be added to the website, but in this issue, especially for our Canadian friends who are now considering the issue of historic cost/current value as they move to accrual accounting, is a short history of why Australia and New Zealand chose to adopt current values.

We also look at "Infrastructure Deficits", what they mean and how they can be interpreted.

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Infrastructure Deficits

How big is the gap - and what does it mean?

How clearly understood is the term “Infrastructure Deficit”?

Infrastructure deficits are now being widely quoted across Canada. There is not much consistency in the approach taken by various councils. Some measure the infrastructure gap as the difference between the replacement cost of assets (i.e. the ‘as new’ level) and the current condition.) Some add to this the cost of new assets to meet growth demands. Others also add the cost of assets to bring services to a new, higher, level. Without knowing which is which makes it difficult to be able to assess the measures quoted.

All are confusing in some respect.

Take the smallest of the measures, the gap between replacement cost and current condition. The word ‘gap’ implies in many minds, that this is a cost that needs to be met now (in fact, for many it is a cost that should have been met some time ago!) However, the appropriate time for renewal could be many decades away. This measure of the Infrastructure Gap does not give a clear indication of the time lines involved. It also assumes that all assets *need* to be replaced - and, given the inevitable changes that take place in community requirements over time, this is not necessarily the case. Furthermore even those assets that do need to be renewed may not need to be renewed at the ‘as new’ level in order to meet the service delivery demands upon them. (see the last issue of SAM about appropriate service levels and their asset requirements)

Measures of the Infrastructure Deficit that include estimates of growth, need to be able to specify the growth content and the time period if the figure is to be understood.

Measures of the Infrastructure Deficit that include estimates of new assets required to lift service levels need to be able to specify what the current levels are and what the new levels are that are being aimed at -and to do this in outcome terms as they affect the end user, if these figures are to be understood.

This can be more fruitful than requiring all deficit measures to be ‘the same’.

> Note 1: applying historic cost values to the measure of the Infrastructure Deficit will make the figures smaller, but it will not make it any easier to understand; indeed, it will make it harder! (see p.3-7)
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> Note 2: Infrastructure deficits are generally called ‘infrastructure gaps’ in Australia and generally refer to the renewal needs of existing infrastructure only when applied to municipal assets.
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> Note 3: The term “backlog” was in common use in Australia in the early 1990s, less so now. It usually refers to maintenance work scheduled but not carried out because of insufficient funds.

Current Value over Historic Cost:

the turning point

Australia and New Zealand are now recognised as world leaders in asset management and looking back, the one decision that put both countries on this path was the early adoption of accrual accounting *with current values.*

Choosing the current value route (rather than historic costs) was not easy - but it was *fruitful*. It forced us to grapple with important aspects of valuation and asset management such as modern engineering equivalents for assets no longer replaced 'as is' (the majority of them!) and how to deal with excess capacity. Moreover the focus on 'value' rather than 'cost' led inexorably to serious consideration of service and service levels which are now taking us to the next phase of advanced asset management as illustrated in recent issues of "Strategic Asset Management".

Of course, at the time of choosing (over 15 years ago) we didn't know these beneficial outcomes lay ahead, so what was it that led us to choose current values over historic costs? Particularly as the rest of the world did not use current values for public sector assets (in fact, didn't use accrual accounting, either).

I have asked Graham Carpenter to help me explain the choice. Graham was the Comptroller-General of Victoria (the senior Finance Officer of our second largest State) and a member of the Public Sector Standards Accounting Board that made the critical accrual accounting decision. Today, all levels of Australian Government have adopted accrual accounting with current values - but,

Complications

Complicating the debate at the time was trying to establish whose viewpoint we should be taking in the valuation of public sector assets. Some economists suggested that we should be valuing these assets at opportunity cost - they then argued that as there was no alternative use for infrastructure assets such as railtrack or roads, the opportunity cost was zero. Other economists argued that this approach would jeopardise dynamic efficiency over time and argued for what is today described as 'fair value' (see SAM 214).

Private sector assets were generally valued at their worth to a purchaser; it was what someone else was willing to pay for the assets that was the deciding factor in this case. But infrastructure assets were not marketed. This caused great confusion for those who wanted to argue that 'all assets were assets' and therefore the same rules should apply.

Eventually, however, sense prevailed and people started asking "what is the *purpose* of valuing public infrastructure" This is when the discussion turned to the use of the resulting valuations and the recognition that if infrastructure assets were not, in the normal course of events, to be sold, then the purpose of the valuation was for management. Only when the value of the asset was known could the right management decision (maintenance/renewal/upgrade/abandonment) be made. This is when the weight of opinion turned to the use of ODRC or optimised depreciated replacement cost. This was applied across all utilities, and infrastructure.

Historic Cost

The major arguments in favour of historic cost have been made for more than 4 decades! At bottom, there are two:

1. **Consistency** requires that we should do what everyone else is doing.

2. Current Values are **too difficult**, variable, 'not objective' and therefore not auditable

Australia and New Zealand decided that neither were correct - but there was much debate before this recognition was reached.

Accepting the first argument would mean we would never make any progress at all. But, of course, progress *is* made in accounting practice, and whenever changes are made to GAAP (Generally Accepted Accounting Practice), the standard by which auditors judge the validity of accounting reports, the new practice will invariably have been in use and validated by a few advanced practitioners - practitioners who, until the new practice was formalised, were actually *ultra vires* GAAP! Accountancy is, rightly, a conservative profession - but changes *are* possible.

Let us turn to the second argument, that current values are too difficult. It is true that - *where the original receipts are still available* - auditing historic cost amounts is an easy task.

However, for many - perhaps most - infrastructure assets, and certainly assets that were acquired 20, 30 and more years ago, *location of original receipts is NO easy task.* It is sometimes impossible and always expensive in terms of effort - effort that is essentially unproductive, in that it yields no information of managerial benefit.

It is also true that current values are 'not objective' but rather subjective. Once the decision has been made to use historic costs the matching of historic cost and receipt IS an objective exercise. What is NOT objective, however, is the CHOICE of historic cost or current value. *This choice must be a subjective choice. All choices are!*

Finally, let us look at the issue of auditability. *It is important that accounts be auditable*. Australia and New Zealand, however, have managed this exercise for 15 years, using market values where appropriate markets exist, and replacement costs where they do not. All infrastructure agencies and municipal governments have, as a matter of operations, an 'estimations section' - a group of engineers whose task it is to estimate the cost of repairs and renewals. Their estimates are continually being checked against market costs. So, even 'replacement costs' can, and are, being validated by the market. Market values are the basis of all private sector equity assessments.

It used to be said that the private sector uses historic costs and therefore the government should do as well. However, for long living assets if the private sector fails to revalue from time to time they become a prime target for takeovers and asset stripping! So the use of historic costs for *successful* businesses is confined to relatively short term assets.

Graham Carpenter also observed that "Opposing arguments [for historic cost rather than current values] primarily are that the tax system (in Australia) is based on historic cost (not a valid argument) and also that the private sector does not have to value to fair value (under Australian Accounting standards - also part of International Financial Reporting Standards) - again not valid given that the private sector (or at least for listed entities) are assessed through the market - in the absence of a market other processes are required to enable performance on the management and use of assets to be undertaken."

New South Wales was the first State in Australia to settle the historic cost versus current values debate when it chose to introduce accrual accounting with current values. At the time, 1989, Nick Greiner was Premier, a graduate of Harvard University and keen to introduce reforms into government that he regarded as 'big business'. One of these reforms was accrual accounting. For some time the debate seemed to be going the way of historic costs for asset valuation on the grounds that 'it is what the private does and we want to be able to compare our efficiency with that of the private sector'. In the end, though, perhaps recognising the points made above, NSW chose to use current values and the rest of Australia did likewise.

Current values have now been adopted in the UK for all municipal property assets and the United States has introduced a current value option in the 'modified approach' of GASB 34. Current values are used for pricing in almost all utilities.

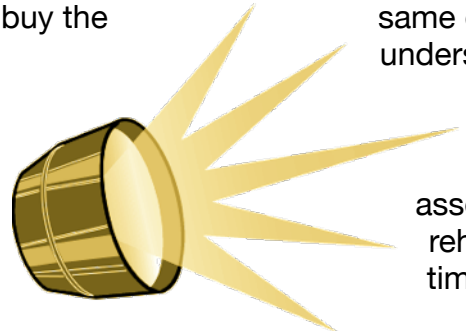
Current Values

What were the other arguments that were used to support current values? There were many. These and others are, no doubt, being discussed in Canada also. I have grouped them here under three headings:

- **Ease of Understanding**
- **Relevance and Comparability between Organisations and Business Units**
- **Reliability for Decision Making Purposes**

Ease of Understanding

When I started work I earned less than two dollars a day. But with that I was able to pay my rent contribution, clothe and entertain myself and run a motor car! When my father started work, a dollar would buy even more! Today a dollar would not even buy a cup of coffee! Unless historical dollar amounts are 'explained' in terms of their purchasing power at the time, it is impossible for us today to comprehend them. We need to see what could be bought and decide for ourselves how much it would cost TODAY to buy the same or similar. In other words, the only way we can understand historical dollars is to convert them into current dollars.



So how are we to interpret - for asset portfolios, or for assets which have been acquired, modified, upgraded or rehabilitated over time - a composite of dollars of different time frames? This makes it impossible to 'explain' the

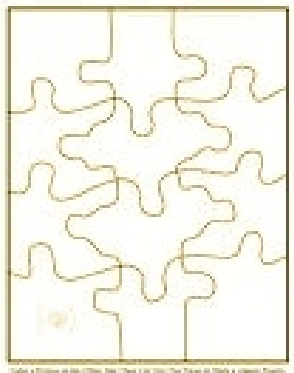
resulting figures. How can we 'comprehend' the purchasing power of a portfolio which consists of some 1950 dollars added to 1975 dollars added to 1990 dollars added to 2007 dollars? Without separating the different elements and performing mental conversions, the figure is meaningless.

Academic economists and economic historians may analyse price trends based on 'dollars of the day' - but they never *add* dollars of one year to another. So, even for historical analysis, 'historical costs' are not used!

Full Costs. the need to understand the full costs of the provision of the goods or services and the need to have a realistic current value figure for the consumption of the service potential in the physical infrastructure (depreciation).

Relevance and Comparability

Rate of Return Expressing a rate of return on assets when the *return is in current dollars* and the *asset values are in historical dollars* is an 'apples and oranges' comparison, it results in a ratio that has no relevance to either current or historical values. (see also relevance to planning, pricing, budgeting, etc. below)



Relevance means everything fits!

Insurance Valuation. The need for information on current value of assets for insurance and/or self insurance assessments and also for catastrophe insurance covers (not directly related to accounting systems but important information nonetheless).

Financial Performance Assessment. the need for information on current values to enable and assessment of the financial performance of a Government Owned Corporation which is not subject to market assessment of the value of the equity - in other words the only way to determine a basis of performance against equity is to have a fair value of market value for the infrastructure assets.

Consistency between Corporations (some of whom may be in the same or similar businesses) in terms of assessing performance - one may have new infrastructure which is valued closer to a current value whilst another providing a similar service may have older infrastructure and have minimal depreciation (see also need for information for replacement).

> **Illustration:** Some 15 years ago, BP Petroleum had targets for each of its business units based on a rate of return on assets valued at historic costs. The best performing manager (the one who had the oldest assets!) was given the opportunity of taking over the newest plant, the pride of the company. He turned them down! The company directors were amazed. "But you are our best performing manager" they said. "Yes", he replied, "but on the oldest assets!" That manager instinctively knew what the directors did not - that performance based on historic cost valuations will favour the older assets.

Pricing. Influence upon pricing decisions may be skewed without current value information. Graham Carpenter says 'it is not necessary to have this in accounting records - but from my experience it helps'

Recording historic cost and managing/pricing in current values can send mixed signals. Consider this:

> **Illustration:** Before current values became generally accepted, the Sydney Water Authority was permitted to calculate current value depreciation for the purpose of determining water prices but the Auditor General insisted that only the 'historic cost' depreciation element be recorded in the books as 'depreciation' and the rest of the current value depreciation be recorded as 'surplus' - thus leading all Sydney water users to the unjustified conclusion that they were being 'ripped off'.

Reliability for Decision Making

Big Ben - the most reliable clock in the world

Renewal Planning. the need for an understanding of the replacement cost of the assets in order to consider issues associated with planning for replacement of assets.

> **Illustration:** A Housing Authority in Australia decided to restructure its portfolio. It wanted to sell off its older housing in one area and buy new housing in another. However it had its asset values expressed in its books at historic cost values. When it sold these houses it was elated to get more than it expected and gloated over its "profit". It was sorely disappointed, however, to find that the money it received bought far fewer new properties than it had expected! Had it kept its records in current market values it would have been able to make more sensible decisions.

Value for Money. Where assets, with a historic cost book value, are sold in an imperfect market place, they have been frequently being heavily underpriced. This was particularly noticeable in the sell off of rail assets to the private sector in the UK (where private sector market revaluations a scant few months later resulted in price increases of 60% to 100%)

Restructuring. Current value information is needed in the event of restructuring or merging of corporations and the need for due diligence associated with assets acquired or disposed of.

Budgeting. Inputs into budgeting processes must, of course, be in current values. If the capital asset being maintained is in historic cost terms, this can give rise to questioning the validity of the decision. For example, the cost of renovating the Sydney Opera House was greater than its original cost - such is the impact of inflation over time, depreciation and rising standards.

Renewals Annuity Planning. In the event of the use of renewals annuity approaches for planning for replacement (including inputs into budgeting) to have current value information - also need current value information for future expansions and major replacements.

Note: Senior Asset Managers and Accountants
Your recollections, history, anecdotes about the historic cost/current value debate would be greatly appreciated. Let us make our history 'live'!

I will give the final word on this topic to Greg McNamara, who, when he was Chairman-elect to the International Valuations Standards Committee in September 1999, had this to say

Historical cost relies upon the recording of asset value at the date of acquisition (purchase) with an arbitrary annual adjustment. These original dates will typically be different for various assets and thus it can be argued that historic cost financial statements lack the significance of comparability, not only between different companies at any given time but even between different assets owned by the same company. In addition, historical cost accounting allows companies to "massage income", that is to understate or overstate asset value and to select when to sell assets to realise profits or losses.

Market Values have the advantage of relevance to the current state of the business - an attribute that this lacking in historic cost accounting. No banker should ever make a secured loan to a customer based on the historical cost of the property. Rate of return measures (yield on capital) and balance sheet measures (gearing ratios) are widely employed by users of financial statements. Obviously and critically, these measurements must be in terms of current values rather than historic cost. Current values are more likely to be comparable in reflecting economic conditions at a particular time and will be understandable by the general public who can relate more readily to current prices.

In terms of real property asset statistics, it must be stressed that to report other than market value is a distortion of the facts. The excuse by accountants and economists that historic cost has been widely practised over a long period of time and hence is familiar to preparers of financial statements, is no longer acceptable in a transparent global economic environment.

THEMES

We are a fluid society: staff movements and organisational restructuring facilitate change - but make it harder for beneficial change to stick. In the absence of strong organisational memories, our website “Themes” provides an ‘industry’ memory. This is what I was writing about when. Your contributions to this ‘industry memory’ are most welcome.

This month we introduce the first three themes - “Asset Information”, “Asset Management Plans” and “Benchmarking”. Here are the first few paragraphs of our Benchmarking Theme

Benchmarking is a comparison *process*. It involves comparing what you are doing to get the outcomes you are getting with what other organisations are doing to get the outcomes that they are getting. (Glossary, **SAM 1**) Benchmarking metric is a tool used in the benchmarking comparison process. It is a way of measuring steps in a process being compared. However a lot of what passes for benchmarking today is simply the collection of data (metric) without comparing processes at all! And therein lies the problem. Benchmarking becomes mindless - and dangerous. In “Benchmarking, the good, the bad and the ugly” I look at how benchmarking started - and how it went wrong! (**SAM 10**)

Then, to be fair, I provide “12 Tips on Improving Performance with Benchmarking” of which Tip #1 is “If you are just beginning, forget about looking at the industry leaders”. Process benchmarking with a partner is a 2-way street. You gain from them and they gain from you. If you do not have anything to offer the industry leader, do not waste their time - or yours! See all twelve tips in **SAM 11.**

More? see www.amqi.com