NEWSLETTER NO. 35

ASSET POOLS - ON-GOING ACCOUNTING

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Newsletter No. 18 looked at asset pools as a way of grouping assets that may be relatively small in value individually, but which you want to capture for tangible capital asset accounting, either because the total value of the assets in an asset pool may be material in value, or simply because you may want to be able to report on the assets for other internal reasons.

As discussed in that Newsletter, the data on the individual assets likely will be maintained by an operating unit in order to manage them, but for accounting and financial reporting, the pool as a whole is treated as a single asset. At that time, we were more concerned with the use of asset pools in preparing asset inventories for the initial valuation. Asset pools can be a useful tool for making the collection of data and maintenance of accounting records more manageable.

That newsletter also included two examples of how one might account for an asset pool at the end of 2009. It has since been pointed out that the suggested accounting treatment was perhaps somewhat specific in looking at what actually was acquired and disposed of during the year, and that one could also use the concept of deemed disposition. If the assets in the pool have a life expectancy of 10 years, then 10% of the assets are deemed to be disposed of each year, and gross and net book value for the pool is therefore reduced by 10%.

Recently, a colleague asked about library collections, as he was dealing with them for his municipality. One question was about creating a special class for the collection, such as “Other” or “Intellectual Property”. There is also the issue of how to account for collection shrinkage, books that are accidentally misplaced or destroyed. This amounts to about 5% of their collection per year. In responding to him, this seemed like a good example of an asset pool, and of how one can account for the pool.

Background

The OMBI studies and classification system that were discussed in Newsletter No. 19 were focused more on buildings and equipment, but there is nothing wrong with having a class called “Other,” for the unusual or distinct items that one comes across. Police weaponry would be another example of an “Other.” You should not create an asset class called “intellectual property” since this is not a tangible capital asset. The same would be true of computer software.

The collections that a library has are certainly tangible capital assets, though the individual book, DVD, cassette or other medium is well below any reasonable capitalization threshold. Including the cost of labeling and preparation for lending, the value of an individual item could be very small. A collection will have thousands of items or titles, so that the total value of the collection may well be material. For accounting purposes, you do not care about the individual item, which would overwhelm you with largely trivial data, and be horrendous to try to maintain. The librarian does that anyway, for operational and management purposes. You are interested in the collection as a whole. Thus you are looking at a collection, or a number of collections, and could treat each collection as an asset pool.

Initial Valuation

The library in question is using a 7-year amortization rate, or assumes that items have a shelf-life of 7 years on average. This recognizes that some volumes may be out of service after one year, whereas others may still be available to be borrowed 13 years after acquisition. For accounting purposes, anything purchased prior to January 1, 2002, is deemed to have been disposed of, or written off. For simplicity, we will assume the collection has no residual value.

Thus the asset pool includes all purchases in the 7 years 2002 to 2008. Acquisitions are a year-round activity, but for accounting purposes, let us assume that the average acquisition date is mid-year, or July 2nd. Amortization will be calculated at half the annual rate, or 1/14, in the year of acquisition and in the year of disposition.

For 2008 and the past six years, determine the value of acquisitions added to the collection. Then the valuation of the initial inventory will be as shown in Table 1. The values shown are for illustration only, and were chosen because they are divisible by 14.

Table 1
Determination of Initial Asset Pool Valuations

Year	Books bought	Annual Amortization							Accum Amort	Net value
		2002	2003	2004	2005	2006	2007	2008		
2002	28,000	2,000	4,000	4,000	4,000	4,000	4,000	4,000	26,000	2,000
2003	29,400		2,100	4,200	4,200	4,200	4,200	4,200	23,100	6,300
2004	30,800			2,200	4,400	4,400	4,400	4,400	19,800	11,000
2005	32,200				2,300	4,600	4,600	4,600	16,100	16,100
2006	33,600					2,400	4,800	4,800	12,000	21,600
2007	35,000						2,500	5,000	7,500	27,500
2008	36,400							2,600	2,600	33,800
Total	**225,400**	2,000	6,100	10,400	14,900	19,600	24,500	29,600	107,100	**118,300**

As of January 1, 2009, the gross book value of the asset pool, of the library collection, is $225,400, less accumulated amortization of $107,100, for a net book value of $118,300. Note that amortization is less than 50% of gross book value, due to the increasing value of the acquisitions each year.

Note that we have identified acquisitions by year, as Section PS 3150.09 of the Public Sector Accounting Handbook requires us to use historical costs, and you should have figures back to 2002

available. This approach works well for library materials where librarians probably have good records for recent years. Modifications to this approach may be used where such information is lacking.

2009 Year-end Valuations

Now let us move forward 12 months, and look at the accounting for 2009, and valuations as of December 31, 2009. We will assume that $37,800 was spent on new acquisitions in 2009, treated as though they all occurred at mid-year. There are two possible ways to proceed.

1) Deemed Disposition by Year

This approach continues the analysis done for the initial valuation, and carries it forward a year. In 2009, the 2002 acquisitions have reached the end of their expected life, and are deemed to be disposed. They will have been 100% amortized, so that their net book value is zero.

Thus the gross book value and the accumulated amortization figures will be reduced by the actual cost of the 2002 acquisitions, whereas they will be increased by the value of the 2009 acquisitions and the 2009 amortization expense, respectively. This is shown in Table 2.

Table 2
Determination of 2009 Year-end Valuations, by year

Year	Books bought	Annual Amortization								Accum Amort	Net value
		2002	2003	2004	2005	2006	2007	2008	2009		
2002	28,000	2,000	4,000	4,000	4,000	4,000	4,000	4,000	2,000	28,000	0
2003	29,400		2,100	4,200	4,200	4,200	4,200	4,200	4,200	27,300	2,100
2004	30,800			2,200	4,400	4,400	4,400	4,400	4,400	24,200	6,600
2005	32,200				2,300	4,600	4,600	4,600	4,600	20,700	11,500
2006	33,600					2,400	4,800	4,800	4,800	16,800	16,800
2007	35,000						2,500	5,000	5,000	12,500	22,500
2008	36,400							2,600	5,200	7,800	28,600
2009	37,800								2,700	2,700	35,100
Total	**263,200**	2,000	6,100	10,400	14,900	19,600	24,500	29,600	**32,900**	140,000	**123,200**
less deemed disposition in 2009											
2002	28,000	2,000	4,000	4,000	4,000	4,000	4,000	4,000	2,000	28,000	0
Final	**235,200**	0	2,100	6,400	10,900	15,600	20,500	25,600	30,900	112,000	**123,200**

The gross book value is now $235,200, up by the difference in value between the 2009 and the 2002 acquisitions. Accumulated amortization is now $112,000, giving an updated net book value of $123,200. The amortization expense for 2009 is shown in the 2009 column, and includes the final charge for 2002, to total $32,900.

Note that although this is analyzing the pool by year, this is treating the year as a sub-pool for calculating amortization. There is no interest or concern for the individual books, CDs or whatever was bought in a particular year. They are acquired and put on the shelf, assumed to have a 7-year shelf-life, and then all are deemed to be disposed of on their seventh birthday.

And this is why there is no accounting to be done for shrinkage of the collection, because such losses are part of the deemed disposition. If a book has to be replaced prematurely, that will be part of the year's acquisitions, and will be amortized appropriately. The book it replaced will continue to be amortized over its expected, rather than its truncated, lifespan because the amortization of the pool of which it was a part is based on the average life expectancy of all members, including those that go "walk-about".

2 – Deemed disposition across the entire pool

The other approach is to amortize and dispose of assets on the basis of the entire pool. We used annual data to come up with the initial valuations for gross book value, accumulated amortization and net book value for the asset pool as a whole. We could then make the assumption that a seventh of the entire pool (across the entire age range) will be deemed to be written off or disposed of in 2009, and calculate the amortization expense on the value of the whole pool as of the beginning of the year. This is shown in Table 3.

Table 3
Determination of 2009 Year-end Valuations, using total pool

Year	Books bought	Accum Amort	Net value	Amortization Expense
December 31, 2008 valuations	225,400	107,100	118,300	
less				
2009 deemed disposition (one-seventh)	(32,200)	(32,200)	0	
plus				
amortization for 2009 (one-seventh)	0	32,200	(32,200)	32,200
= Dec 31, 2009 value of 2008 inventory	193,200	107,100	86,100	
2009 acquisitions	37,800	0	37,800	0
= Final Dec 31, 2009 values reported	231,000	107,100	123,900	32,200

In this case, amortization is calculated in full on the anniversary of the acquisition, so that for 2009, amortization expense for the pre-2009 assets in the pool will be one-seventh of the gross book value, and there will be no amortization expense calculated for the assets acquired in 2009. This will increase accumulated amortization by this amount, and reduce net book value by the same amount.

There is a deemed disposition of one-seventh of the assets in the pool, so that gross book value and accumulated depreciation will be reduced by one-seventh. Net book value will be unchanged.

There is a significant difference in the figures for gross book value and for accumulated depreciation, because the deemed disposition is calculated as one-seventh of the entire pool, not as the earliest year, when less was spent on acquisitions. If annual acquisition costs did not change significantly, the difference would be marginal, as it is for net book value and for amortization expense.

This approach may be closer in spirit to the concept of the asset pool, whereas the determination of valuations by year is perhaps closer to the reality of what happens in terms of dispositions in the field. Either approach could be used, though expert opinion is more in favour of the disposition by year approach, not least because it makes more intuitive sense. You will generally replace the oldest assets in your pool first.

PS 3150.22 states that "The cost, less any residual value, of a tangible capital asset with a limited life should be amortized over its useful life in a rational and systematic manner appropriate to its nature and use by the government." If your assets, like books, can have a life of anywhere from three weeks to over many years, then deeming dispositions over the entire pool may be a more rational manner. This may be especially true if you are replacing items on a fairly constant basis, such as a fixed amount acquisition budget each year, or a constant number of units to be replaced, such as culverts, beds or desktop computers.

As always, be consistent in the approach you use. Whichever method you choose, will you be able to satisfy your external auditor that there is compliance in all material respects with PS 3150?

2010 Year-end Valuations

For interest, the analysis was carried through for 2010, using both approaches, as shown in the following two tables:

Table 4
Determination of 2010 Year-end Valuations, by year

Year	Books bought	Annual Amortization								Accum Amort	Net value
		2003	2004	2005	2006	2007	2008	2009	2010		
2003	29,400	2,100	4,200	4,200	4,200	4,200	4,200	4,200	2,100	29,400	0
2004	30,800		2,200	4,400	4,400	4,400	4,400	4,400	4,400	28,600	2,200
2005	32,200			2,300	4,600	4,600	4,600	4,600	4,600	25,300	6,900
2006	33,600				2,400	4,800	4,800	4,800	4,800	21,600	12,000
2007	35,000					2,500	5,000	5,000	5,000	17,500	17,500
2008	36,400						2,600	5,200	5,200	13,000	23,400
2009	37,800							2,700	5,400	8,100	29,700
2010	39,200								2,800	2,800	36,400
Total	**274,400**	2,100	6,400	10,900	15,600	20,500	25,600	30,900	**34,300**	146,300	**128,100**
less deemed disposition in 2010											
2003	29,400	2,100	4,200	4,200	4,200	4,200	4,200	4,200	2,100	29,400	0
Final	**245,000**	0	2,200	6,700	11,400	16,300	21,400	26,700	32,200	116,900	**128,100**

Table 5
Determination of 2010 Year-end Valuations, across the entire pool

Year	Books bought	Accum Amort	Net value	Amortization Expense
December 31, 2009 valuations	231,000	107,100	123,900	
less				
2010 deemed disposition (one-seventh)	(33,000)	(33,000)	0	
plus				
amortization for 2010 (one-seventh)	0	33,000	(33,000)	33,000
= Dec 31, 2010 value of 2009 inventory	198,000	107,100	90,900	
2010 acquisitions	39,200	0	39,200	0
= Final Dec 31, 2010 values reported	237,200	107,100	130,100	33,000

The larger differences between the values derived by the two approaches now cover two years, and are driven by the higher valuation that the total pool approach assigns to deemed dispositions, or average value versus FIFO (first-in, first-out).

The Impact of a Book Sale

Thus far, we have assumed that the assets in the pool have no residual value, and that the acquisition cost will be 100% amortized. The assets are deemed to be disposed. If the library sells decommissioned items, the proceeds would be revenue, which can be accounted for in two ways.

Preferable would be to treat this as sales or sundry revenue, with any consideration received recorded as a gain on sale of tangible capital assets deemed to be written off in full (= zero value). Notionally this would offset some of the amortization expense for the year on the operating accounts. The other approach would deem the consideration received to be a residual value, and therefore the amortization expense should be adjusted to allow for that, by posting the credit side of the transaction against amortization expense.

As an aside, it is normally incongruent to discuss residual values in the context of an asset pool, because that implies that individual assets may have residual values, and you are not dealing with individual assets. For asset pools, it would be preferable to assume zero residual value, as we did here, unless you know that you can recover a given percentage of cost when disposing of the assets in an asset pool.

If you can recover 10% of historical cost, then amortize only 90% of the cost, and account for any differences on disposition. Otherwise, use zero residual value, and record any proceeds of disposition as gain on sale of tangible capital assets.

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Our next newsletter will compare the findings of the deflator study that MFOA and AMCTO completed, with the Book Value Calculator developed by the Canadian Federal Government.

For more information and resources regarding tangible capital asset management, go to PSAB/Asset Management or contact:

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NOTE: This Newsletter is published to assist you with your implementation of tangible capital asset accounting and with related matters. The Public Sector Accounting Handbook is the only authoritative primary source on matters relating to GAAP, and you should consult with your auditor to resolve specific issues that you may have.