
Property Tax Audits: Applying Asset Obsolescence in a Good Way

By Greg Leahy

Greg Leahy discusses appraisal methods, obsolescence, and how taxpayers can be successful when dealing with property tax assessors.

Introduction

In recent years, states have been struggling to balance their budgets and eliminate deficits while looking for ways to increase revenue. These initiatives have had a cascading effect on local jurisdictions, leading many to search for revenue to make up for these shortfalls. One of the major sources of revenue for local jurisdictions is the property tax. The relative ease to apply and administer the property tax makes it an easy target for many jurisdictions to use in securing revenue for their districts. Although determining the amount of the property tax revenue needed is purely a mechanical calculation, valuing personal and real property is rather subjective due, in large part, to the assessor's judgment and the valuation method employed.¹

One defense taxpayers may have against overvalued property-tax assessments is to argue for obsolescence. Intuitively, this goes against the norm for most for-profit organizations to have to argue that their assets have diminished value or may even be worthless. However, absent other defenses, this argument may save companies thousands of dollars in property tax. The obsolescence argument is only applicable to a particular appraisal method and therefore should not be utilized if other methods are employed by the appraiser.

To get a better understanding of the appraisal methods and how to proactively use obsolescence, the following discussion will outline appraisal methods with a focus on the cost method, both functional and external obsolescence, and how multiple forms of obsolescence may apply to a single property. It concludes with suggestions on how to have success with the assessor.

Greg Leahy is an International Tax Manager with Actuant Corp. in Milwaukee.

Appraisal Methods

In most states, property tax is based on the fair market value of the property being assessed (*i.e.*, what a willing buyer and seller would do given all relevant information and with no compulsion to either buy or sell). There are three generally accepted methods used to determine the fair market value for real property: the sales method, the income method and the cost method.

The sales comparison method is based on comparable sales of similar or like properties within the general vicinity of the subject property, but can be expanded nationwide if there are insufficient local comparables. The sales comparison method is widely used in assessing manufacturing properties, homes and other property that lends itself to readily available comparables.

The income method is used primarily for income-producing properties, where an estimated income stream is divided by the capitalization ratio (*i.e.*, the rate a prudent investor would expect for a rate of return on their investment) to determine the fair market value. Examples of property that is assessed using the income method are office buildings and rental properties.

Finally, the cost method values property by using current costs to replace or reproduce the property while factoring in obsolescence (either economic or functional). The cost approach is used for personal property, manufacturing or special-use properties where the other methods do not lend themselves to an accurate appraisal.

Overview of the Cost Approach

The cost approach can be divided into two appraisal methods; reproduction-cost new and replacement-cost new. Reproduction-cost new is defined as the cost of reproducing a new replica of the property on the basis of current prices, using the same or similar materials to build an exact duplicate. In contrast, replacement-cost new is defined as the cost of constructing the current asset with the same functionality but may incorporate new technology or materials that could be less expensive to construct. To the extent the assets are not new, the replacement-cost new is adjusted for losses in value due to physical depreciation and obsolescence. The assessor will generally use one of these two appraisal methods to determine the fair market value of the appropriate asset.

After the appraiser determines which cost method to apply in determining the asset's value, he reduces

that value for physical depreciation to determine its fair market value. Physical depreciation differs from book or tax depreciation in that it is determined by the physical wear and tear or deterioration of the asset and not necessarily by a fixed table or assumed ratable depreciation over the life of the asset. The assessor generally uses a uniform physical depreciation table when calculating an asset's fair market value in conjunction with his inspection of the property. The fair market value of the asset is assessed based on the reproduction-cost new or replacement-cost new less physical depreciation, not including functional or economic obsolescence. This provides the taxpayer a window to reduce the assessment by asserting obsolescence.

Functional Obsolescence

Functional obsolescence may seem like a bad thing from an operational standpoint, but may be beneficial in staving off a higher property tax assessment. In calculating most asset assessments, assessors will not take into account obsolescence, in part because they do not have enough time, information or expertise. This provides taxpayers with an opportunity to reduce their assessments significantly. Some examples of industries that have significant asset obsolescence can be found in the high-tech arena where the change in technology is rapid and the functionality of assets may diminish significantly in a short period of time (*e.g.*, computers, semiconductors, telecommunication equipment, consumer electronic, *etc.*). Other industries that face a great deal of obsolescence are those where products have a diminishing use, which leads to less production and excess capacity.

One aspect to consider if you are a taxpayer trying to argue for a reduction in assessments is how "functional obsolescence" is defined. The American Society of Appraisers defines the term as:

[t]he loss in value of usefulness of a property caused by inefficiencies or inadequacies of the property itself, when compared to a more efficient or less costly replacement property that new technology has developed. Symptoms suggesting the presence of functional obsolescence are excess operating cost, excess construction (excess capital cost), overcapacity, inadequacy, lack of utility, or similar conditions.

As defined, obsolescence is centered on the usefulness of the asset itself and not by external factors, but

there are indicators that taxpayers can use to assist functional obsolescence.

Indicators of Functional Obsolescence

Functional obsolescence is hard to identify, quantify and document when a taxpayer is trying to argue for a reduction in its property tax assessment. To some, obsolescence is in the eye of the beholder; what one person may assume to be a nonfunctioning asset may still seem to be a viable asset to someone else. Several factors may assist the taxpayer in providing information to the assessor that defends its assertion that some assets are functionally obsolescent. The following is a listing of some useful indicators that may assist the taxpayer in defending its position with the assessor.

As a starting point, it is recommended that taxpayers go through a plant tour with the plant maintenance supervisors in order to get a better understanding of the assets, plant layout and overall functionality of the production area so they can have a frame of reference when they request additional information from other departments (e.g., finance, accounting, engineering, etc.). Additionally, taxpayers should requisition the blueprints for the plant where the assessment is in dispute to familiarize them with the layout of the production area and to verify that assets are where they are supposed to be located. If the assets have been removed, taxpayers should make note of those assets. During the tour, taxpayers should record their observations for either idled, disposed-of or junked-in-place assets. Identifying these assets is an indication of functional obsolescence and will assist taxpayers later on in proposing their argument to the assessor.

Other assets that taxpayers should examine for functional obsolescence are those which are currently in use, but will require replacement in the near future. These assets are typically scheduled to be replaced when they are no longer operating at maximum capacity or have been idle for some time. Along these same lines, the plant maintenance manager should indicate assets that have been, or will be, rebuilt or modified to improve operating capacity. Taxpayers should review the capital expenditure appropriations or budgets to determine what

assets are going to be replaced or rebuilt and ask the plant maintenance supervisor to identify assets during the plant tour.

Some assets that appear to be fully operational may not be in production due to technological obsolescence contributing to reduced manufacturing capacity. In certain industries, such as computer or home-electronics manufacturing, technological

changes increase the possibility of functional obsolescence exponentially. In general, taxpayers can plan ahead to modify or utilize other technologies while updating or upgrading their existing assets. This may provide for a reprieve from a high-

er assessment if they can prove and document their assets are not in production during modification.

Environmental restrictions may force taxpayers to either retire or modify certain assets in any given year. One example is where taxpayers are required to further modify their environmental pollution controls. Modifications to these assets (e.g., retooling, etc.) may span several years and could provide reductions in their assessments over multiple years. When taxpayers undergo environmental restriction remediation, they should investigate and document the plans to modify the assets. This should provide support for taxpayers to provide to the assessor.

Observations taxpayers should document while on the plant tour are assets presently at the plant that are backups or redundant in manufacturing or production activities. An example of redundant assets would be multiple binding machines used at the end of a printing press when only one binding machine can be utilized at any given time. The taxpayer runs the risk of having the assessor deny these arguments on the basis the taxpayer is able to cure these deficiencies.

One of the last things a taxpayer should investigate on the plant tour are idled assets permanently affixed to the facility that cannot be physically moved or removed without destroying the assets themselves or surrounding assets. The taxpayer should review the blueprints and have discussions with the plant maintenance supervisor to identify the assets that are affixed permanently to the facility.

The taxpayer may be able to identify assets that exhibit functional obsolescence without going on

In calculating most asset assessments, assessors will not take into account obsolescence, in part because they do not have enough time, information or expertise.

a plant tour by identifying those assets that are operating at a higher cost relative to the more modern replacement assets that are also in service. The best way to ascertain this information is to contact the local plant cost accountant or a member of the finance department and have the run times for the assets in question or the fixed asset reports reviewed. These reports and discussions will assist the taxpayer in determining which assets have diminishing returns and therefore may be operating at a less than optimum cost level than more modern or replacement assets.

Measuring Functional Obsolescence

Once the taxpayer has identified assets that are functionally obsolescent, determining the amount of the assessment is the next task. Measuring functional obsolescence can be accomplished in several different ways that include:

- calculating the present worth of the future excess operating costs associated with the assets in question;
- determining how much cost would be incurred to cure the obsolescence within a reasonable, justifiable cost; or
- identifying the difference between reproduction cost and replacement cost limited by what an owner would be economically justified in investing.

Any of the methods is acceptable, but taxpayers should utilize the one method they feel most comfortable with and have a basis to support their calculations when presenting their findings to the assessor.

Economic Obsolescence

In contrast to functional obsolescence, where the taxpayer has some control over the assets in question, economic (or commonly referred to as external) obsolescence is based on factors outside of the taxpayer's control. The American Society of Appraisers defines the term "economic obsolescence" as:

[t]he loss in value of usefulness of a property caused by factors external to the property, such as increased cost of raw materials, labor or utilities (without an offsetting increase in product price); reduced demand for the product; increased competition; environmental regulations; inflation or high interest rates; or similar factors.

Economic obsolescence is generally a bit more difficult to prove than functional obsolescence. For

example, a taxpayer in a down cycle may rebound in future years and therefore have a hard time proving economic obsolescence. To ensure the taxpayer has adequate support, it should monitor indicators that may signify economic obsolescence in its business.

Indicators of Economic Obsolescence

Most indicators of economic obsolescence are not readily available, in part because the factors are not in the immediate control of the taxpayer. This results in extra time and effort for the taxpayer to craft its argument for economic obsolescence. The following is a brief list which may assist the taxpayer in defending its position with the assessor based on economic obsolescence.

If the taxpayer is experiencing a lack of demand for a product or service, this might be an indication of economic obsolescence. An example of a reduced demand for the product would be when a pharmaceutical company's product is on the decline after it loses FDA approval, or when serious side effects start showing up in patients. A mere decline in products or services solely based on the taxpayer's poor performance or products should not be considered, as these are actions the taxpayer has the ability to fix and are not external to the taxpayer.

When a taxpayer has an excess supply of competitive services or products, it is a good indication of economic obsolescence. Increasingly, manufacturers are utilizing low-cost countries (*i.e.*, Asian sourcing) to perform their activities, which results in taxpayers experiencing greater excess supply in products that are not engaged in low-cost country outsourcing. When competitors utilize low-cost labor, this translates into lower product costs and leads to a competitive disadvantage for taxpayers that do not outsource. This has a direct impact on the taxpayer's economic obsolescence.

Changes in the quality of materials, labor, utilities and transportation services can also affect a taxpayer in an adverse way. The loss in quality of these services can diminish the taxpayer's ability to compete as consumers look for more reliable and dependable products from other providers. In a similar aspect, changes in the local economy may also contribute to the loss in economic benefits to the taxpayer. A change in the local economy may mean the taxpayer would have to convert or change its existing assets' use to something other than what they are designed for, resulting in an economic loss to the taxpayer.

Legislative requirements are by far the most widespread and have the greatest impact on taxpayers'

ability to claim economic obsolescence. Taxpayers are usually required to dispose of assets or make additional capital investments to comply with the law. For example, most coal-burning utility companies had to install or upgrade their existing assets to adhere to the Clean Air Act passed by Congress. The cost to comply with government regulations is very costly and time-consuming and may lend itself to taxpayers' asserting economic obsolescence as a result of decreased production or idle assets while the assets are being upgraded.

Measuring Economic Obsolescence

Quantifying economic obsolescence can be a difficult proposition for the taxpayer to prove and substantiate. Some of the more common methods include: calculating the present value of the cost required to cure the obsolescence, quantifying the excess operating capacity (e.g., using an inutility percentage), or measuring the income shortfall to the assets. As a general rule, the taxpayer should use the lesser of the cost to cure or quantifying excess operating capacity and income shortfalls generated by the assets. For example, if the cost to cure an asset was \$100,000 and excess operating capacity was determined to be \$400,000, the taxpayer would only be able to use the \$100,000 as an argument for economic obsolescence. The taxpayer can use either method, but should always verify that the calculations do not exceed the amount to cure the assets.

Multiple Forms of Obsolescence

It is possible to have a single property subject to both functional and economic obsolescence. In most cases, the assessor may have a hard time allowing the taxpayer to assert both forms of obsolescence. The assessor may point to the taxpayer's fixed asset schedules to prove that assets still have value since

they are still recorded on the books. In response to the assessor's initial rebuttals, the taxpayer should argue that even though the assets have been assigned a value for accounting purposes, they are idle, or the taxpayer should provide documentation that they are functionally obsolete.

When arguing for obsolescence, the taxpayer should first argue for functional obsolescence and then attempt to prove its case for economic obsolescence, the reason being that functional obsolescence is generally easier to prove than economic. An example of multiple forms of obsolescence is illustrated below.

Multiple Obsolescence Example

Electronix Corp. is a Delaware corporation that manufactures consumer electronic equipment in various states. In 2005, Electronix's tax department received a notice of assessment for one of its manufacturing plants located in Illinois, where the assessor used the replacement-cost method less physical depreciation to determine the fair market value of the plant was \$18 million. The consumer-electronics business is an ever-changing market where technology makes current electronic components and products obsolete year over year. Electronix's tax department has pulled together some information from the finance department and various outside sources to argue for a reduction in the assessed value based on multiple obsolescence.

For functional obsolescence, the taxpayer has compiled the following information. The useful life for most of Electronix's assets is 10 years. The finance department monitors industry trends (e.g., industry average cost-per-unit information) by reviewing and tracking them through industry specific trade journals. To cure the subject assets would cost the company \$3.2 million. (See Table 1.)

**Table 1: Electronix Inc.
Operating Cost Analysis—January 1, 2005**

Cost Differential	Subject Assets	Consumer Electronics Industry Average
2004 Cost Per Unit (\$/unit produced)	\$.55	\$.50
Unit Cost Differential	\$.05	
Production Units for the Year	10,000,000	
Total Annual Cost Differential	\$500,000	
Useful life of Subject Assets	10	
Present Value over Useful Life (10 years) at 15% Discount Rate	Approx. \$3,200,000	
Total Functional Obsolescence	\$3,200,000	

Table 2: Taxpayer’s Determination of Property’s Fair Market Value

Description	Calculations	Amount
Replacement Cost Less Physical Depreciation		\$18,000,000
Less: Functional Obsolescence	See Table 1	(\$3,200,000)
Less: Economic Obsolescence	Inutility % times the assessed value (\$18M x 15.85%)	(\$2,853,000)
Taxpayer’s assessment of Fair Market Value		\$11,947,000

The tax department is using the inutility percentage to determine the amount of economic obsolescence. The inutility percentage equals: $[1 - (\frac{\text{Actual Production}}{\text{Rated Capacity}})^N] * 100$.

The formula assumes the economic decline in the assets due to external factors differs exponentially rather than at a liner pace. The letter “N” in the formula represents the exponential factor of decline (this is generally based on a specific industry). For purposes of this example, Electronix used the “N” factor of 0.6 which represents the scale factor for consumer electronic manufacturing assets in similar operating plants. The tax department had discussions with finance and the plant accountants to determine the subject assets are operating at an actual production capacity of 75 million units with a capacity rate of 100 million units. This renders a facility capacity of 75 percent. The inutility calculation yields 15.85 percent that will be multiplied by the replacement-cost new less physical depreciation to determine the subject assets’ economic-obsolescence value.

The assessor used the replacement cost less physical depreciation to determine the fair market value of the Illinois plant. Electronix’s tax department has gathered sufficient information and performed calculations for both functional and economic obsolescence and applied these calculations to the assessment. The fair market value determined by the assessor was based in part on the replacement cost less physical depreciation without factoring in obsolescence. Electronix’s tax department is arguing for additional reductions in the fair market value based on both functional and economic obsolescence. In this example, the assessor determined the value of the property, based on replacement cost less physical depreciation, was \$18 million. The taxpayer

determined the fair market value of the property as shown in Table 2.

By gathering some information and providing an analysis for the assessor, the taxpayer may be able to greatly reduce its property-tax assessments. The use of either functional or economic obsolescence is something that should not be overlooked when reviewing property-tax assessments for any given year. As illustrated in this example, the taxpayer reduced its assessment by over \$6 million just by doing some legwork and documenting assumptions.

Conclusion

The ultimate goal of any taxpayer when debating with an assessor on an assessment is to ascertain the asset’s true fair market value. Many appraisal methods may be employed and various arguments crafted to defend either party’s position. When using the cost approach, taxpayers should consider obsolescence as a way to reduce their assessment. However, it is up to taxpayers to identify, document and substantiate their assertion of obsolescence in order to convince the assessor.

In preparing for discussions with the assessor, the taxpayer should be prepared with a well-thought-out and documented approach. If appropriate, the taxpayer should seek advice from other colleagues or advisors on the best way to address the value of the property with the assessor. Additionally, a review of any recent court cases may provide some insight as to how aggressive the jurisdiction is in defending its assessments. This may provide insight into what methods the assessor is most comfortable applying to the property and will provide the taxpayer with the framework in which to construct an argument. Finally, the taxpayer should always have an alternative approach or backup plan as there may

be more than one way to achieve the same result. By following some of these suggestions and applying asset obsolescence in a good way, the taxpayer may ultimately reduce its property-tax assessment and mitigate the effects to its bottom line.

ENDNOTE

- ¹ In general, the property tax rate is determined by the locality's annual operating budget that is not funded by other revenue sources, divided by the value of all taxable property within the jurisdiction (commonly referred to as the mill rate). The property tax revenue is calculated by multiplying the mill rate by the assessed value of the property.

This article is reprinted with the publisher's permission from the JOURNAL OF STATE TAXATION, a bimonthly journal published by CCH, a Wolters Kluwer business. Copying or distribution without the publisher's permission is prohibited. To subscribe to the JOURNAL OF STATE TAXATION or other CCH Journals please call 800-449-8114 or visit www.CCHGroup.com.

All views expressed in the articles and columns are those of the author and not necessarily those of CCH or any other person.



TM

CCH

a Wolters Kluwer business