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Economic Obsolescence and Market Value

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External Obsolescence in Unit Valuation

- **External Obsolescence is a component of all three valuation approaches**
 - It is implicit in the market approach (lower multiples)
 - It is implicit in the income approach (lower income)
 - It is explicit in the cost approach
- **Our presentation is focused on cost approach unit valuation methods**

External Obsolescence (EO) Controversy

- **Valuation analysts disagree about:**
 - the factors that cause EO
 - the appropriate methods to quantify EO
 - the proper application of the methods to quantify EO
- **Courts disagree about:**
 - The appropriate methods to quantify EO
 - The application of the methods to quantify EO
- **These disagreements can result in large differences**

Court's Want . . .

“. . . a taxpayer claiming external obsolescence must prove both the cause of the asserted obsolescence and that the subject property is actually affected by that cause.” . . . “as a matter of law, a taxpayer claiming external obsolescence must offer probative evidence of the cause of the claimed obsolescence, the quantity of such obsolescence, and that the asserted cause of the obsolescence actually affects the subject property.”

EO Definitions

- Valuing Machinery & Equipment: A form of depreciation where the loss in value or usefulness of a property is caused by factors external to the property.
- Appraisal of Real Estate: External obsolescence may be caused by economic or locational factors. It may be temporary or permanent, but it is not usually curable on the part of the owner, landlord, or tenants.
- WSATA Handbook: a temporary or permanent impairment of the utility or salability of an improvement or property caused by factors external to the property.
- IAAO: External Obsolescence is loss in value as a result of impairment in utility and desirability caused by factors external to the property (outside of the property's boundaries) and is generally deemed to be incurable.

EO Causes

- Appraisal of Real Estate: Causes of EO can be broadly characterized as either market obsolescence or locational obsolescence.
- WSATA Handbook: External obsolescence may result from adverse market conditions. Because of its fixed location, real estate is subject to external influences that usually cannot be controlled by the property owner, landlord, or tenant. This loss in value is sometimes referred to as external obsolescence.
- IAAO: EO can be caused by a variety of factors, such as changes in the highest and best use of a property due to market shifts or governmental actions, tariffs, regulated rate of return, restrictions on income, zoning, neighborhood decline, lack of property demand, and national economic conditions (war, oil prices, and interest rates).

EO Definition Key Points

- **EO is external to the property (property owner(s) cannot control EO)**
- **EO results in a decrease in value**
- **EO can be property-specific or have a market wide influence**
- **EO can be temporary or permanent**
- **Crux: The taxpayer does not earn a fair rate of return on the subject property**

There is No EO Boilerplate

“As long as appraisers objectively examine the facts, apply appropriate analytical methods, and avoid double-counting depreciation, they are limited only by their resourcefulness and creativity” [emphasis added]

Source: Valuing Machinery & Equipment

Illustrative Examples External Factors that Reduce Property Value

- **Valuing Machinery and Equipment:**

- Reduced earnings
- Reduced utilization
- Changes in use
- Idle or shutdown plants in the industry
- Restructuring within the industry

- **Guide to Property Tax Valuation:**

- Rates of return are decreasing
- Overcapacity
- Competition is increasing
- Demand is decreasing
- Supplier costs are increasing

E0 Identification Example #1

- **Subject taxpayer operates a pipeline**
- **A new competitor enters the market**
- **A customer representing 20% of pipeline capacity leaves for the new competitor**

- **Is there E0?**

You Need More Information

Reasons for EO:

- The loss is external to the property since (1) the lost customer is external to the property and (2) the pipeline still performs the function it was designed to perform
- The TP can no longer earn a fair rate of return on its assets

Reasons for No EO:

- Taxpayer was already earning above-market return on assets
- Taxpayer was operating at above-market capacity and the lost customer dropped capacity to market-based levels

E0 Identification Example #2

- **Subject taxpayer operates a small regional airline**
- **The taxpayer's net fixed assets have been stable over the last 3 years**
- **The taxpayer's operating profit margins have declined every year over the last 3 years**
- **Is there E0?**

You Need More Information

Reasons for EO:

- The airline is not earning a fair rate of return on its assets, which is a generally accepted indicator of EO.

Reasons for No EO:

- Ticket price increases could have more than offset the lost volume
- The TP could have been operating above normalized industry capacity already
- The loss in profitability could be related to the tangible property (i.e., functional obsolescence), not external to the property (i.e., usually large maintenance expenses)

Intangible Personal Property (IPP) in the Cost Approach

- If EO is not properly estimated, the cost approach may include value attributable to IPP
- If you calculate EO and the result is a positive number, you may have included IPP
- The cost approach may include IPP in the income shortfall method if returns include income from real estate, TPP, and IPP

Generally Accepted Methods to Quantify EO

1. The inutility analysis method
2. The direct comparison of property with and without obsolescence (“direct comparison”) method, aka paired sales analysis
3. The capitalization of income loss method

Nonexhaustive sources considered: The Appraisal of Real Estate, Valuing Machinery & Equipment, Guide to Property Tax Valuation, IAAO Handbook, WSATA Handbook

General Acceptance of Methods to Quantify EO in Authoritative Sources

	Inutility Analysis Method	Allocation of Market-Extracted Depreciation	Direct Comparison Method (Paired Sales)	Capitalization of Income Loss Method
The Appraisal of Real Estate (page #)	No [a]	No [b]	Yes (633)	Yes (635)
Valuing Machinery and Equipment (page #)	Yes (76)	No	Yes (80)	Yes (79)
Guide to Property Tax Valuation (page #)	No	No	Yes (262)	Yes (262)

[a] Page 259 mentions functional inutility as an example of functional obsolescence.

[b] This method was recommended until the 13th edition, but is absent from the 14th edition. This EO measurement method is also discussed in the IAAO Handbook

The Inutility Analysis Method

Pros and Cons

Pros:

- Quantitative
- Production and capacity data are often available
- Conceptually easy to understand
- Does not borrow data from market approach or income approach

Cons:

- More applicable to a single facility than to a large, complex, integrated units w/ multiple lines of business
- Doesn't consider taxpayer's return on assets
- Not discussed in all unit valuation or property valuation textbooks

The Inutility Analysis Method

- *Valuing Machinery & Equipment:* “measures the loss in value by reducing the capital investment from rated capability to the actual operating level to ‘balance’ the plant.”
- Applied to the RCN after physical depreciation and Functional Obsolescence
- Inutility Percent:

$$\left[1 - \left(\frac{\text{? ? ? ? ? ? ? ? ? ? ? ? ? ?}}{\text{? ? ? ? ? ? ? ? ? ? ? ? ? ?}} \right) \text{? ? ? ? ?} \right]$$

100

The Inutility Analysis Method Example

Facts:

- Actual Production = 750 Units
- Design Capacity = 1,000 Units
- Scale Factor = 0.6

Inutility Calculation:

$$\left[1 - \left(\frac{750}{1,000} \right)^{0.60} \right] \times 100$$

15.85%

Capitalization of Income Loss Method—Definition

- *The Appraisal of Real Estate*: This method “is applied in two steps. First, the market is analyzed to quantify the income loss. Next, the income loss is capitalized to obtain the value loss affecting the property as a whole.”
- Comparative in nature—an actual return is often compared to a required return
- This is not a “circular” method or a residual method

Capitalization of Income Loss Method—Comparative Measures

- **Methods based on comparing TPs current profitability to:**
 - Profitability during a time period when there was no EO
 - Profitability of guideline companies
 - Profitability based on projections that lead to the subject property investment decision
 - Others
 - Source: Guide to Property Tax Valuation p. 267

Capitalization of Income Loss Method— Illustrative Examples

- **Analysis of industry returns**
 - ROIC in subject industry vs. all industries
- **Supply/demand relationships**
 - Determine if surplus supply or excess demand exists
- **Gross margin analysis**
 - Compare current gross margins vs. past margins
- **Stock prices**
 - Compare subject industry price-to-book multiples to general market multiples

Source: Partial list from Valuing Machinery & Equipment

Court's Critique

“At best, therefore, TP’s income-deficiency method is illogical. . . . At worst, TP’s income-deficiency method strips the cost approach of its use as an independent determiner of value, because it always will track the result under the income approach.”

- **Income Shortfall Method is problematic in many states: NJ, AK, OR, AZ, UT, CA, MT, ID, CO**

Circular Example

Income Approach Value Conclusion 400

	<u>Example #1</u>	<u>Example #2</u>
RCNLD (Before Economic Obsolescence)	500	50,000
Less: Income Approach Value	<u>(400)</u>	<u>(400)</u>
Equals: Economic Obsolescence	<u>100</u>	<u>49,600</u>

RCNLD (Before Economic Obsolescence)	500	50,000
Economic Obsolescence	<u>(100)</u>	<u>(49,600)</u>
Cost Approach Value Conclusion	<u>400</u>	<u>400</u>

- Value of the RCNLD (before EO) does not impact the concluded value of the taxable property
- Concluded value from the cost approach will always equal the concluded value from the income approach
- This inappropriate application of the income shortfall method has been rejected by many courts

Variation 1—Appraisal Institute

Appraisal Institute Variation Applicability

- Based on comparing actual NOI with market-based (equilibrium) NOI
- The difference is capitalized
- Works well for commercial real estate when key variables such as market lease rates are available
- May work when the impact of rate restrictions is easily measured for regulated industries (be aware of “bad law”)

Appraisal Institute Variation Qualitative Analysis

- Subject Property is a commercial shopping center with long-leases at below-market rates
- Reliable information about market lease rates is available



Appraisal Institute Variation

Calculation of E0

	At Equilibrium Rent	At Current Rent
Potential Gross Income	\$67,500	\$50,625
Less: Vacancy and Collection Loss	<u>-\$6,750</u>	<u>-\$5,063</u>
Equals: Effective Gross Income	\$60,750	\$45,562
Multiplied by: Net Income Ratio	<u>x 0.6667</u>	<u>x 0.6667</u>
Equals: Net Operating Income	\$40,500	\$30,375
Income Loss	\$10,125	(\$40,500 - \$30,375)
Divided by: Overall Capitalization Rate	<u>7%</u>	
Equals: Capitalized Value of Loss of Income	<u>\$144,645</u>	
Concluded Economic Obsolescence	<u>\$144,645</u>	

Variation 2—Single Period TP Returns

Single-Period Return Variation Applicability

- Only one measure of income is analyzed
- Only one time period is analyzed
- Useful when one ratio tells the story (like the inutility analysis)

Single-Period Return Variation Qualitative Analysis

- Taxpayer owns and operates a paper mill that manufactures newsprint
- The TP taxable property (i.e., tangible property) has been largely unchanged for the last 5 years
- As demand for newsprint declined, the company sales and income declined in tandem
- Oversupply in the industry has caused prices to decline while demand was falling

Single-Period Return Variation Calculation of EO

- **Example Facts:**

- Assessment Date: 1/1/16
- 12/31/15 RCNLD (before EO) = \$10 million
- 2015 Net Operating Income = \$1 million
- 1/1/16 WACC = 12%
- Required return on fixed assets = WACC

- **EO Calculation:**

- (Actual return of 10% ÷ Required Return of 12%) - 1 =
Income Shortfall of 17%

Criticism

The income-deficiency method calculated obsolescence by comparing the rate of return on the assets subject to taxation to the rate of return required to attract investment. Thus, that method relied upon figures calculated in TP's income approach to determine obsolescence in the cost approach.

Court found this to be circular.

Delta Air Lines, Inc. v. Department of Revenue, State of Or.,
328 Or. 596 (1999).

Court's Want More

“ . . . establish the factors comprising the claimed obsolescence, to identify the assets affected thereby, and to quantify the amount of obsolescence for each asset.”

Variation 3—TP Time Series

Time-Series Returns Variation Applicability

- **Analyze TP ratios over time**
- **Compare current ratios (when EO exists) to historical ratios (when EO did not exist)**
- **Useful for companies with stable asset bases**
- **Useful when the EO is either company-specific or market-wide**
- **Useful when reliable market data is unavailable (because this method only relies on TP data)**

Validity of Time Series to Measure E0

- **The Appraisal of Real Estate:**
 - The estimate of equilibrium rent is based on “market rent during a recent time period of equilibrium”
- **IAAO Handbook:**
 - “E0 is the diminished utility.”
- **Valuing Machinery & Equipment:**
 - “develop a trend showing increasing supply over time.”
 - “show how gross margins are declining”
 - “show how margins are declining”
 - “look for indications of reduced earnings, reduced utilization . . . among others.”

Time-Series Returns Variation Qualitative Analysis

- **Subject TP operates a pipeline**
- **The pipeline assets have been stable over time (only maintenance capital expenditures have been made)**
- **Revenue is earned from contracts with customers that are market based**
- **The TP lost several major customers in 2014 due to increase competition**

Time-Series Returns Variation Terms Used Following Slides

- **EBIT = Earnings before interest, taxes, depreciation and amortization expense**
- **EBITDA = Earnings before interest, taxes, depreciation and amortization expense**
- **Invested Capital = Working capital + fixed assets + other assets as of 12/31/15**
- **Net Fixed Assets = Book value of net fixed assets after consideration of FO as of 12/31/15**
- **Data sources: Company own financials**

Time-Series Returns Variation

Calculation of E0 (1 of 2)

Taxpayer Financial Fundamentals & Ratios	2015	2014	2013	2012	2011	2010	2010 to 2014 Average
EBITDA	19	30	48	49	37	36	40
Total Assets	185	205	235	260	280	300	256
Invested Capital ("IC")	175	200	230	250	275	300	251
Revenue	50	55	70	67	60	100	70
EBITDA Return on Assets	10.3%	14.6%	20.4%	18.8%	13.2%	12.0%	15.8%
EBITDA Return on IC	10.9%	15.0%	20.9%	19.6%	13.5%	12.0%	16.2%
EBITDA Return on Rev.	38.0%	54.5%	68.6%	73.1%	61.7%	36.0%	58.8%

Time-Series Returns Variation

Calculation of EO (2 of 2)

	Based on Return on Total Assets	Based on Return on Invested Capital	Based on Return on Revenue
2015 Taxpayer Rate of Return	10.3%	10.9%	38.0%
2010 to 2014 Average Taxpayer Rate of Return	<u>15.8%</u>	<u>16.2%</u>	<u>58.8%</u>
Indicated Economic Obsolescence [a]	35.1%	32.9%	35.4%

Calculation of EO Example	
Average Return (Without EO)	15.8%
2015 Return (With EO)	- 10.3%
Total Income Shortfall	5.5%
Economic Obsolescence = $5.5\% \div 15.8\%$ =	35.1%

Concluded Economic Obsolescence	35%
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Variation 4—Market-Based Time Series

Market-Based Time-Series Variation

Applicability

- Analyze market-based profitability over time (i.e., does not rely on the actual TP income)
- Compare current market ratios (when EO exists) to historical market ratios (when EO did not exist)
- Useful when the EO is market-wide
- Useful when reliable market data are available—such as raw material costs or sales prices

Market-Based Time-Series Variation

Qualitative Analysis

- Subject TP operates a coal-fired electric gen. facility
- The facility operations began in 2007
- The price of coal has increased over the last 5 years and the price of electricity and natural gas have decreased over the last 5 years
- Coal-fired plants have been shutting down while natural-gas-fired plants and renewable energy facilities have been built
- The facility could rarely operate at a profit in its latest year, and its capacity factor was only 15% during the most recent year

Market-Based Time-Series Variation

Calculation of E0

Average Annual Operating Profit Margin per MWh for 2007-2014

Year	Electricity Price \$/MWh	Coal Price \$/MMBtu	Heat Rate Btu/KWh	Station			Operating Margin per MWh
				Gross Profit (\$/MWh)	Variable Cost per MWh	Fixed Cost per MWh	
2014	35.37	2.06	9,200	16.43	2.00	6.09	8.34
2013	30.24	2.07	9,200	11.24	1.95	5.94	3.35
2012	26.34	2.02	9,200	7.76	1.90	5.79	0.06
2011	42.75	2.03	9,200	24.11	1.86	5.65	16.60
2010	33.67	1.94	9,200	15.77	1.81	5.51	8.45
2009	28.31	1.91	9,200	10.76	1.77	5.38	3.62
2008	46.71	1.88	9,200	29.39	1.72	5.25	22.42
2007	49.11	1.63	9,200	34.08	1.68	5.12	27.28
Change between 2007 - 2014				51.8%			69.4%
Change between 2008 - 2014				44.2%			62.8%

Variation 5—Comparison to Guideline Companies

Comparison to Guideline Cos. Variation Applicability

- Compare TP ratios (with EO) to guideline company ratios (without EO)
- Useful for large companies with diverse operations
- Useful when sufficiently comparable guideline companies can be identified
- Recognizes taxpayer-specific EO
- Does not recognize industry-wide EO

Comparison to Guideline Cos. Variation Qualitative Analysis

- The TP provides a variety of telecom services, including high-speed internet, TV, home phone, and other related services to residential, business, and government customers
- The telecom industry is rapidly changing
- The TP assets offer slower data transfer speeds than its competitors
- The TP generally has a similar level of intangible personal property as its competitors
- The TP earns lower profit margins than its competitors

Comparison to Guideline Cos. Variation

Calculation of EO (1 of 4)

1. Identify relevant ratios for comparison
2. Select guideline publicly traded companies (GPTCs)
3. Calculate GPTC ratios
4. Select the market-based ratio based on the GPTC ratios calculated in step 3
5. Compare the TP ratios to the selected market-based ratios—the income shortfall is economic obsolescence

Comparison to Guideline Cos. Variation Calculation of E0 (2 of 4)

Value Measure	Guideline Co. Profitability Measures				Selected Normalized Ratio [a]
	Quartile 1	Quartile 2	Quartile 3	Quartile 4	
EBIT/Net Tangible Assets:					
Projected	8.5	10.0	12.3	17.0	12.3
Latest 12 Months	6.7	8.6	13.1	24.6	13.1
3-Year Average	7.0	9.2	13.4	18.4	13.4
EBITDA/Net Tangible Assets:					
Projected	13.0	14.4	16.5	20.6	16.5
Latest 12 Months	10.4	11.6	17.1	27.7	17.1
3-Year Average	11.2	11.8	17.0	21.2	17.0

[a] Based on the Quartile 3 ratio, because the quartile one and quartile two ratios may be negatively affected by obsolescence and the quartile four ratios may be positively affected by the ownership of intangible assets.

Comparison to Guideline Cos. Variation Calculation of E0 (3 of 4)

Value Measure	Selected Normalized Ratio [a]	Taxpayer Ratio	Indicated Shortfall	Indicated Economic Obsolescence [b]
EBIT/Net Tangible Assets:				
Projected	12.3	10.5	1.8	14.8
Latest 12 Months	13.1	11.5	1.6	12.1
3-Year Average	13.4	11.0	2.4	17.9
EBITDA/Net Tangible Assets:				
Projected	16.5	13.0	3.5	21.4
Latest 12 Months	17.1	14.0	3.1	17.9
3-Year Average	17.0	13.5	3.5	20.6

[a] From prior slide.

[b] Equals: Indicated Shortfall ÷ Selected Normalized Ratio.

Comparison to Guideline Cos. Variation Calculation of EO (4 of 4)

Value Measure	Indicated Economic Obsolescence [a]	Value Measure Weight	Weighted Economic Obsolescence
EBIT/Net Tangible Assets:			
Projected	14.8	20%	3.0%
Latest 12 Months	12.1	20%	2.4%
3-Year Average	17.9	10%	1.8%
EBITDA/Net Tangible Assets:			
Projected	21.4	20%	4.3%
Latest 12 Months	17.9	20%	3.6%
3-Year Average	20.6	10%	<u>2.1%</u>
Concluded Economic Obsolescence (rounded)			<u>17%</u>

[a] From prior slide.

Capitalization of Income Loss Method – Variations

	Applicability to Various Industries				
Variation	Railroad	Electric	Telecom	Airline	Pipeline
Appraisal Institute	Less	Less	Less	Less	Less
Single-Period TP Returns	Normal	Normal	Less	Less	Normal
TP Time-Series	More	More	Normal	More	More
Market-Based Time Series	Normal	More	Less	Normal	Normal
Comparison to Guideline Companies	More	More	More	More	More

Disclaimer: Depends on the specific facts and circumstances

Lessons Learned From Court Cases

What Not To Do

- TP submitted two articles, only one of which supported its use of the income-deficiency method in the cost approach to value
- TP left court unable to conclude from the evidence what type of obsolescence adjustment was required
- TP-appraiser testified that by using the income-deficiency method, his cost indicator always would have equaled his income indicator

What Not To Do

- Incorporate income figures that account for only owned assets, while it uses cost figures that account for both owned and leased assets
- TP failed to account for income from properties that TP had purchased with deferred income taxes
- TP failed to explain how each of the federal burden impacted the value
- TP positions lacked consistency internally or with positions it took elsewhere e.g. FERC filing

What Not To Do

- Rather than compare TP's income to the income of other airlines, TP Appraiser "created a comparison market by hypothesizing an entirely subjective figure for what he thought that TP's earnings should be and compared the hypothetical earnings to its actual earnings
- Instead of using TP's allowed rate of return ,TP Appraiser used a projected rate of return based on TP's five previous years of actual earning experience

Direct Comparison Method

Direct Comparison Method

- **EO is estimated by comparing the value of comparable property with economic obsolescence to the value of comparable property without economic obsolescence.**
- **The value of the comparable property in this method is usually based on transaction data.**

Direct Comparison Method Example

	<u>Value</u>
Improved Sales	
Sale A – 12-unit Apt. Building Near Asphalt Batching Plant	\$1,000
Sale B – 12-unit Apt. Across Town	<u>\$1,600</u>
Indicated EO of Entire Property	\$600
Land Sales	
Sale C – Land zoned for Apt Near Asphalt Batching Plant	\$300
Sale D – Land zoned for Apt Across Town	<u>\$500</u>
Indicated EO of Land	\$200
Allocation of EO	
Subject EO Improvements	\$400
Subject EO Land	<u>\$200</u>
Total EO for Subject Property	<u>\$600</u>

Direct Comparison Method Cost Approach

RCN of Improvements	\$1,200
Less: Physical Depreciation	\$200
Less: Functional Obsolescence	\$200
Less: Economic Obsolescence of Improvements	<u>\$400</u>
Equals: RCNLD of Improvements	\$400
Concluded from Sales Comparison Method	\$400
Less: Economic Obsolescence of Land	\$200
Equals: Subject Land Value	<u>\$200</u>
RCNLD of Improvements	\$400
Land Value	<u>\$200</u>
Value Indication by Cost Approach for Subject Property	<u>\$600</u>

Direct Comparison Method

Pros and Cons

Pros:

- Generally accepted
- Based on market data

Cons:

- Can be challenging to perform due to a lack of transaction data that are sufficiently comparable to the subject property for this method to produce credible results
- Doesn't consider taxpayer's return on assets
- Not as useful for utility type unit valuations



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Economic Obsolescence Case Studies & Discussion

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Outline – 5 Recent Court Decisions Illuminating Economic Obsolescence Issues

- **BP v. Alaska Cases**
 - Economic Obsolescence Cases
 - Income Shortfall Method
 - Other Issues
- **Puget Sound Energy v. Montana**
 - Proof of Economic Obsolescence
- **Pacificorp v. Wyoming**
 - CWIP/Economic Obsolescence
- **Level 3 Communications v. Arizona**
 - Bad Business Judgment
- **Dreyer’s Grand Ice Cream v. Arizona**
 - Excess Capacity and Economic Obsolescence



BP Pipelines v. State of Alaska (Alaska Supreme Court, 2014)

Background

- TP argued for FMV of \$850 million using income approach or alternatively a cost approach with substantial depreciation and EO for 2006 property tax year
- Municipalities argue for value of \$12 billion using cost approach
- Alaska DOR valued it at \$3.6 billion
- State Assessment Review Board: \$4.3 billion
- Superior Court: \$10 billion
- Supreme Court: affirmed, added interest back to 2006 and, later, attorneys fees and costs
- Central Issue: Economic Obsolescence

BP Pipelines et al v. State of Alaska

TP Argument For EO Deduction

- There should have been a deduction from cost approach for EO based on the effect of government regulation of the tariffs the owners are allowed to charge shippers for transportation of oil
- Trans-Alaska Pipeline System (“TAPS”) is worth less than a new pipeline because, under existing regs, a new pipeline would be allowed to charge higher tariffs due to higher costs.

Owners' Arguments

- By not making an EO deduction from replacement cost of the pipeline, state was not assessing the value of TAPS, but of a hypothetical pipeline that is free from the legal restrictions affecting the value of TAPS.
- TAPS appraiser used income shortfall method to calculate EO.
 - Difference between tariff allowed vs. higher tariff from newly constructed pipeline's higher rate base
 - Calculated \$1.3 billion in EO deduction

\$1.3 BILLION

State's Argument

- **State appraiser unable to calculate EO because no market data exists for TAPS “due to the lack of comparable income streams or comparable sales”**
- **Higher tariffs on a newly constructed pipeline would not be enough to hinder production or make the oil uncompetitive**
- **If property is worth the cost of replacement (i.e. potential revenue to be gained compared to cost to construct is comparable to figures when pipeline was first constructed), the no EO to be calculated.**

Alaska Supreme Court Decision

- **Rejected Income Shortfall Method:**
 - Differs from “established method” of calculating capitalized income.
 - Established method would compare similar properties, one regulated and one unregulated
 - TAPS income shortfall method compared existing property to hypothetical new one, both subject to current regulations
 - Testimony: “Not widely accepted practice”
 - Testimony: Does not appear in widely accepted appraisal manuals
 - Authorities cited by owners were not “authoritative”

Court's HBU Analysis

Another Problem:

- **Primary value of the pipeline is the ability to monetize Alaska north slope oil reserves.**
- **Companies collecting the pipeline tariffs are closely related to the companies paying the tariffs.**
- **So, fact that new pipeline could charge higher tariffs does not imply that the new pipeline would be more valuable to its owners.**
- **HBU of TAPS is not as a stand-alone investment property, but as part of integrated transportation and production system.**

COURT: HBU = “Use Value”

- **Pipeline’s value is its use as part of the integrated production and transportation system – not as a stand-alone investment.**
- **This HBU is divorced from whatever tariff revenue the property may generate.**



Excess Capacity

- **Alaska Supreme Court did require EO deduction for excess capacity**
- **Actual throughput much lower than pipeline's maximum capacity**
- **Is super-adequacy functional obsolescence or economic obsolescence?**
- **Court: label doesn't matter; deduction either way.**

Double Deduction?

- **Municipalities argued that lower court double counted depreciation due to excess capacity by using both the economic age-life method and applying additional deduction for excess capacity.**
- **Held: no double deduction.**
- **Economic age/life accounted for less oil being delivered to the pipeline, but did not take into account that the design capacity of the pipeline is greater than necessary to handle the projected throughput during the lifetime of the pipeline. These are two separate reductions in value.**

Sequel: BP 2 (Decided in 2015)

- **Similar arguments for 2007-2009; similar results**
- **Continued court skepticism of income shortfall method**
- **This time, municipalities argued that any negative external obsolescence was outweighed by positive external factors, such as higher oil prices**
 - **Argument rejected**
 - **Even if oil flowing through pipeline were more valuable, the quantity flowing through it would not change**
 - **Higher price of oil does not change the amount of inutility the pipeline experiences from decreased throughput**
- **EO from excess capacity affects entire property, not just pipeline itself**

Discussion Points

Did Alaska Supreme Court get it right?

- Is income shortfall method not widely accepted?
- Should there have been an economic obsolescence deduction from State's cost approach related to higher tariffs for a new pipeline?
- What's wrong with income comparison between existing pipeline and new pipeline with higher tariffs, both subject to rate regulation?
- Is use of economic age/life method and excess capacity deduction, a double counting of obsolescence?

Beware of situations where the pipeline owner and its customers are the same or related parties.

More Proof Issues

- **Puget Sound Energy v. Montana DOR (Montana Tax Appeal Board, 2012)**
 - PSE argued that PSE suffered from serious and detrimental EO in a appraiser's reports
 - **BUT PSE "DID NOT PRESENT ANY ACTUAL EVIDENCE OF ECONOMIC OBSOLESCENCE"**
 - PSE presented evidence of "income shortfall" without providing evidence to support claim that the income shortfall resulted from economic obsolescence
 - "Mere statements by PSE employees" about regulatory lag and drag insufficient to demonstrate EO

Proof Issues



- Board wanted “actual documented evidence of impairment”
- PSE did not report economic obsolescence to regulators or shareholders
- PSE expert used income shortfall method to calculate EO (historical earnings vs. allowed rate of return)
- Board rejects validity of income shortfall method, citing prior precedents

Proof Issues

- **Income shortfall method “converts what should be two separate stand-alone indicators of value (cost approach and income approach) into one indicator of value by adjusting cost approach with income approach”**
- **“Merely demonstrating complex mathematical schematic is insufficient to prove economic obsolescence”**
- **Bottom line: PSE failed to offer a convincing narrative demonstrating actual economic obsolescence.**

Lesson

- **Don't rely solely on mathematical computations to show economic obsolescence**
- **Need to tell the story with a convincing narrative**
- **Income shortfall method is risky in some jurisdictions. Need to know precedents in that jurisdiction before using it.**



Issue: Should CWIP Be Subject To Economic Obsolescence Deduction?

- **Pacificorp appeal (Wyoming SBE, 2006)**
- **CWIP taxable, but not included in rate base until placed in service**
- **EO adjustment of 40% was undisputed**
- **Argument against subtracting EO from CWIP:**
 - **It is “bizarre” for a utility to invest in CWIP when the assets would immediately be worth less than the price paid for them.**
 - **In this case CWIP would immediately be worth 40% less than cost**

CWIP/EO

Argument FOR Subtracting EO From CWIP:

- Cost does not equal value
- Adding unadjusted cost figure (for CWIP) to a value figure (for all other property) contaminates estimate of market value
- Under unit method theory, all properties in the unit are treated as contributing equally to value
- Newly deployed equipment is adjusted for EO on day 1, so why not CWIP?

COST
v.
VALUE

Ruling

- Board held that CWIP must be reduced by EO. (In this case, EO was 40% so CWIP immediately worth 40% less than the cost of the CWIP).



- Discussion point:
 - Does this decision make sense? Is CWIP immediately worth less than cost due to EO?

Can Bad Business Judgment Create Economic Obsolescence?

- **Level 3 Communications v. Arizona DOR (Arizona Ct. of Appeals, 2009)**
- **Level 3 overbuilt its fiber optic cable network, overestimating demand and underestimating supply.**
- **Increased competition and declining demand are recognized external obsolescence factors**
- **It is also recognized that EO need not be permanent**



Court:

- **External obsolescence cannot be established by a factor within the taxpayer's control.**
- **“Mere erroneous business judgment does not create obsolescence”**
- **Taxpayer also measured economic obsolescence on a national scale but failed to prove that there was any obsolescence specific to Arizona**

Does Excess Capacity Always Point to Economic Obsolescence?

- **No.**
- **Example: Dreyer's Grand Ice Cream v. County of Kern (Cal. Ct. of Appeal 2013)**
- **Taxpayer had lots of excess capacity in its ice cream production lines.**
- **But Court held that TP failed to prove that:**
 - **the excess capacity did not have value due to seasonality of production/demand**
 - **the excess capacity was caused by a decline in market demand for the product**
 - **the excess capacity was caused by external forces beyond TP's control**

Dreyer's Lesson

- **Excess capacity alone does not prove economic obsolescence**
- **Excess capacity can have value in some circumstances**
- **Must have convincing evidence that the excess capacity was caused by recognized external market factors (e.g. decline in overall market demand) and not the taxpayer's own business decisions**