Institute for Professionals in Taxation

Valuation and Allocation of Intangible Assets—Methodology

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Robert Reilly has been a managing director of Willamette Management Associates for 24 years. Willamette provides business valuation, forensic analysis, and financial opinion services for transaction, financing, taxation, bankruptcy, litigation, and planning purposes. Robert frequently provides valuation, economic damages, and intercompany transfer price analyses related to intellectual property and other intangible assets. Robert has testified in both federal and state courts on numerous occasions on intangible asset valuation, damages, and transfer price matters.

Robert holds a BA in economics and an MBA in finance, both from Columbia University. He is a certified public accountant, accredited in business valuation, and certified in financial forensics. He is also a chartered financial analyst, chartered global management accountant, certified management accountant, certified business appraiser, certified valuation analyst, certified valuation consultant, certified review appraiser, certified real estate appraiser, and state-certified general appraiser.

Robert has served as a member of the AICPA forensic and valuation services executive committee (FVSEC), business valuation committee (BVC), and consulting services executive committee (CSEC). He is an inductee into the AICPA business valuation hall of fame.

Learning Objectives

After attending this presentation, the participant will be able to:

- Define the term “intangible asset”
- Identify common examples of intangible assets and intellectual property
- Identify common reasons to value intangible assets
- Identify property valuation approaches and methods that may include intangible asset value
- Apply the generally accepted intangible valuation approaches
- Recognize the method to extract the identifiable asset value from the reconciled total property value
- Recognize the method used to extract the identifiable intangible asset value from each individual property valuation approach (before the final value reconciliation)
What is an Intangible Asset?

- It should be an asset, and it should be intangible
- FASB Statement of Financial Accounting Concepts No. 5 (CON 5) provides guidance on what is an asset:
  - It must provide probably future economic benefits
  - The owner/operator must be able to receive the benefit and restrict others from access to the benefit
  - The event that provides the right to receive the benefit has occurred
- Intangible means something that lacks physical substance
- For an intangible asset, intangible means that the economic benefit of the asset does not come from its physical substance
- Intangible asset value is based on the rights and privileges to which it entitles the owner/operator
Intangible Asset Attributes

• An intangible asset should have the following attributes
  ◦ It is subject to a specific identification and recognizable description
  ◦ It is subject to legal existence and legal protection
  ◦ It is subject to the rights of private ownership, and that private ownership should be transferable
  ◦ There is some tangible evidence or manifestation of the existence of the intangible asset
  ◦ It is created or it comes into existence at an identifiable time or as the result of an identifiable event
  ◦ It is subject to being destroyed or to a termination of existence at an identifiable time or as the result of an identifiable event
  ◦ There should be a specific bundle of legal rights associated with the intangible asset
Identifiable Intangible Assets
ASC Topic 805 Recognition Considerations

- FASB ASC 805-30-20 Glossary:
  **Identifiable Intangible Assets**
  The acquirer recognizes separately from goodwill the identifiable intangible assets acquired in a business combination. An intangible asset is identifiable if it meets either (1) the separability criterion or (2) the contractual-legal criterion described in the definition of “identifiable.”
Knowledge Check I

Which of the following are the generally accepted criteria for the recognition of an identifiable intangible asset?

A. It must meet the separability criteria and the contractual/legal rights criteria
B. It must meet the separability criteria or the contractual/legal rights criteria
C. It must always meet the separability criteria
D. It must always meet the contractual/legal rights criteria
Knowledge Check I

Which of the following are the generally accepted criteria for the recognition of an identifiable intangible asset?

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B. It must meet the separability criteria or the contractual/legal rights criteria
C. It must always meet the separability criteria
D. It must always meet the contractual/legal rights criteria
Identifiable Intangible Assets
ASC Topic 805 Recognition Considerations

- FASB ASC 805-30-20 Glossary:
  **Identifiable**
  An asset is identifiable if it meets either of the following criteria:
  
  1. It is separable, that is, capable of being separated or divided from the entity and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract, identifiable assets, or liability, regardless of whether the entity intends to do so.
  
  2. It arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.
Identifiable Intangible Assets
ASC Topic 804 Recognition Considerations

- FASB ASC 805-30-20 Glossary:

  **Intangible Assets**
  Assets (not including financial assets) that lack physical substance. (The term intangible assets refers to intangible assets other than goodwill.)
What is Not an Intangible Asset?

- There are intangible attributes or intangible influences that may affect the value of intangible assets
- These attributes or influences are not assets
- Examples include:

  1. High market share
  2. High profitability or high profit margin
  3. Lack of regulation
  4. A regulated (or protected) position
  5. Monopoly position (or barriers to entry)
  6. Market potential
  7. Breadth of customer appeal
  8. Mystique
  9. Heritage
  10. Competitive edge
  11. Life-cycle status
  12. Uniqueness
  13. Discount prices (or full prices)
  14. Positive image
  15. First to market
  16. Technological superiority
  17. Consumer confidence or trustworthiness
  18. Creativity
  19. High growth rate
  20. High return on investment
  21. Size
  22. Synergies
  23. Economies of scale
  24. Efficiencies
  25. Longevity
Examples of Intangible Assets: ASC 805

- **Marketing-related intangible assets**
  - Trademarks, trade names, service marks, collective marks, certification marks
  - Trade dress (unique color, shape, package design)
  - Newspaper mastheads
  - Internet domain names
  - Noncompetition agreements

- **Customer-related intangible assets**
  - Customer lists
  - Order or production backlog
  - Customer contracts and related customer relationships
  - Noncontractual customer relationships
Examples of Intangible Assets: ASC 805

- Artistic-related intangible assets
  - Plays, operas, and ballets
  - Books, magazines, newspapers, and other literary works
  - Musical works such as compositions, song lyrics, and advertising jingles
  - Pictures and photographs
  - Video and audiovisual material, including motion pictures or films, music videos, and television programs
Examples of Intangible Assets: ASC 805

- Contract-based intangible assets
  - Licensing, royalty, and standstill agreements
  - Advertising, construction, management, and service or supply contracts
  - Lease agreements (whether the acquiree is the lessee or the lessor)
  - Construction permits
  - Franchise agreements
  - Operating and broadcast rights
  - Servicing contracts such as mortgage servicing contracts
  - Employment contracts
  - Use rights such as drilling, water, air, timber cutting, and route authorities
Examples of Intangible Assets: ASC 805

- Technology-based intangible assets
  - Patented technology
  - Computer software and mask works
  - Unpatented technology
  - Databases, including title plants
  - Trade secrets, such as secret formulas, processes, and recipes
Examples of Intangible Assets: IRC 197

- Internal Revenue Code Section 197 intangible assets include:
  - Goodwill
  - Going concern value
  - Any of the following intangible items:
    - workforce in place including its composition and terms and conditions (contractual or otherwise) of its employment,
    - business books and records, operating systems, or any other information base (including lists or other information with respect to current or prospective customers),
    - any patent, copyright, formula, process, design, pattern, knowhow, format, or other similar item,
    - any customer-based intangible,
    - any supplier-based intangible, and
    - any other similar item.
  - Any license, permit, or other right granted by a governmental unit or an agency or instrumentality thereof.
Examples of Intangible Assets: IRC 197 (cont.)

- Internal Revenue Code Section 197 intangible assets include: (cont.)
  - Any covenant not to compete (or other arrangement to the extent such arrangement has substantially the same effect as a covenant not to compete) entered into in connection with an acquisition (directly or indirectly) of an interest in a trade or business or substantial portion thereof
  - Any franchise, trademark, or trade name
  - Other Internal Revenue Code sections (e.g., 482 and 936) include other lists of intangible assets
Knowledge Check 2

Which of the following is a common example of a marketing-related intangible asset?

A. Trademarks and trade names
B. High market share
C. Large market potential
D. Being first to market
Knowledge Check 2

Which of the following is a common example of a marketing-related intangible asset?

A. Trademarks and trade names
B. High market share
C. Large market potential
D. Being first to market
Intangible Asset Recognition and Exemption in the Subject Taxing Jurisdiction

- Are intangible assets exempt from property taxation in your taxing jurisdiction?
  - The answer depends on the relevant statutory authority, judicial precedent, and administrative rulings

- What is an exempt intangible asset in your taxing jurisdiction?
  - The answer depends on the relevant statutory authority, judicial precedent, and administrative rulings
  - State and local taxing authorities are not bound by GAAP or federal income tax authority

- Does the assessor’s property valuation include the value of intangible assets?
  - That depends on the property valuation approaches and methods used
  - That depends on the individual valuation variables selected
Intangible Asset Property Taxation Considerations

- Many jurisdictions exempt some or all intangible personal property from property taxation.
- Intangible assets include intangible personal property and intangible real property.
- To the extent that such exemptions apply, they typically apply to taxpayer properties that are assessed using either:
  - summation (individual property) valuation methods or
  - unit (collective property) valuation methods.
- Therefore, taxpayers will:
  - determine if the assessor’s property assessment includes the value of exempt intangible assets,
  - identify the exempt intangible assets,
  - value the exempt intangible assets,
  - extract the value of the exempt intangible assets from the proposed property tax assessment.
Types of Property that Encompass Intangible Assets in the Property Tax Assessment

- Some of the types of property that may encompass identifiable intangible assets include:
  - hospitality (e.g., hotels, restaurants)
  - health care (e.g., nursing homes, hospitals)
  - retail (e.g., regional shopping malls)
  - entertainment (e.g., theatres, stadiums)
  - sports (e.g., arenas, race tracks)
  - service properties (e.g., CATV, marinas)
  - utility properties (e.g., telecom, water/wastewater)
  - transportation properties (e.g., railroads, airlines)
  - extraction (e.g., mines)
  - oil and gas (e.g., refineries, pipelines)
Types of Property that Encompass Intangible Assets in the Property Tax Assessment (cont.)

- For these types of properties, it may be difficult for the assessor to separate the RE and TPP rental income from the business operating income
- These types of properties often sell as going-concern businesses
- Unless the assessor (or taxpayer) makes an effort to extract the taxpayer intangible assets, property assessments based on income approach, market approach, and (to some extent) cost approach methods will capture:
  - real estate,
  - tangible personal property, and
  - intangible assets.
When Are Intangible Assets Included in the Property Assessment?

- For summation method property tax valuation, intangible assets may be included in the assessment
  - in the income approach when
    - either operating business income (and not property rental income) is used or operating business cost of capital (WACC) components are used in the yield cap method or in the direct cap method
  - in the sales comparison approach when
    - market-derived pricing metrics are extracted from the sales of operating business properties
  - in the cost approach when
    - there is economic obsolescence and
    - the economic obsolescence analysis does not assign a fair rate of return to the taxpayer intangible assets
When Are Intangible Assets Included in the Property Assessment? (cont.)

- For the unit method of property tax valuation, intangible assets may be included in the assessment:
  - in the income approach when
    - either operating business income (and not property rental income) is used or operating business cost of capital (WACC) components are used in the yield cap method or in the direct cap method
  - in the sales comparison approach when
    - pricing multiples are extracted from the sales of going concern businesses
    - pricing multiples (or direct capitalization rates) are extracted from public company stock market data
  - in the cost approach when
    - there is economic obsolescence and
    - the economic obsolescence analysis does not assign a fair rate of return to the taxpayer intangible assets
Effect of Intangible Assets on Cost Approach Economic Obsolescence

• Hypothetical example fact set
  ◦ real estate (RE) and tangible personal property (TPP) cost approach RCNLD $10,000,000
  ◦ identifiable intangible assets (IA) cost approach RCNLD $4,000,000
  ◦ subject property business operating income $1,000,000
  ◦ required return on investment (ROI)/cost of capital 10%
Effect of Intangible Assets on Cost Approach Economic Obsolescence

• Simplified test for economic obsolescence—not considering intangible assets

required ROI

actual ROI operating income $1,000,000 = 10%
RE + TPP RCNLĐ $10,000,000

income shortfall/economic obsolescence 0%

value of RE and TPP (i.e., RCNLĐ) $10,000,000
Effect of Intangible Assets on Cost Approach Economic Obsolescence

- Simplified test for economic obsolescence—considering intangible assets

<table>
<thead>
<tr>
<th>required ROI</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>actual ROI</td>
<td>operating income</td>
</tr>
<tr>
<td></td>
<td>RE + TPP + IA RCNLD</td>
</tr>
</tbody>
</table>

income shortfall/economic obsolescence – (10% - 7.1%) ÷ 10% 29%

value of RE and TPP (RCNLD of $10,000,000 – 29% ec obs) $7,100,000
Generally Accepted Intangible Asset Valuation Approaches and Methods

• **Cost approach methods**
  ◦ Reproduction cost new less depreciation method
  ◦ Replacement cost new less depreciation method
  ◦ Trended historical cost less depreciation method

• **Market approach methods**
  ◦ Relief from royalty method
  ◦ Comparable uncontrolled transactions method
  ◦ Comparable profit margin method

• **Income approach methods**
  ◦ Differential income (with/without) method
  ◦ Incremental income method
  ◦ Profit split method (or residual profit split method)
  ◦ Residual (excess) income method
Knowledge Check 3

Which of the following procedures will typically result in intangible assets being included in the property valuation?

A. Ignoring economic obsolescence in the cost approach
B. Using the band of investment method in the income approach
C. Failing to confirm transaction prices in the sales comparison approach
D. Capitalizing business operating income in the income approach
Knowledge Check 3

Which of the following procedures will typically result in intangible assets being included in the property valuation?

A. Ignoring economic obsolescence in the cost approach
B. Using the band of investment method in the income approach
C. Failing to confirm transaction prices in the sales comparison approach
D. Capitalizing business operating income in the income approach
Assembled Workforce Illustrative Valuation Example – Cost Approach, RCNLD Method

• Illustrative fact set
  ◦ The valuation date is 1/1/15
  ◦ The property operates with 50 employees
  ◦ There are three principal staff levels; let’s call them executives, managers, and administrative staff
  ◦ The assessor valued the subject property by capitalizing the $3 million business operating income by a 10% cap rate to conclude a $30 million property value
  ◦ The assessment includes the value of intangible assets
  ◦ The analyst will estimate the value of the assembled workforce to extract that value from the total assessment
Trained and Assembled Workforce, Replacement Cost New Less Depreciation Method as of 1/1/15

<table>
<thead>
<tr>
<th>Assembled Workforce Employee Component</th>
<th>No. of Employees</th>
<th>Average Salary</th>
<th>Other Costs Factor</th>
<th>Full Absorption Cost</th>
<th>Percent of the Total Annual (Full Absorption) Cost Required to</th>
<th>Percent of Full Absorption Cost to Replace Employees</th>
<th>Average Replacement Cost New Component</th>
<th>Total Replacement Cost New Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executives</td>
<td>10</td>
<td>180,000</td>
<td>1.6</td>
<td>288,000</td>
<td>20% 20% 40%</td>
<td>80%</td>
<td>230,400</td>
<td>2,304,000</td>
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<tr>
<td>Managers</td>
<td>20</td>
<td>60,000</td>
<td>1.5</td>
<td>90,000</td>
<td>10% 10% 30%</td>
<td>50%</td>
<td>45,000</td>
<td>900,000</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>20</td>
<td>40,000</td>
<td>1.4</td>
<td>56,000</td>
<td>5% 10% 25%</td>
<td>40%</td>
<td>22,400</td>
<td>448,000</td>
</tr>
<tr>
<td>Total employees</td>
<td>50</td>
<td></td>
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<td></td>
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<td></td>
<td>3,652,000</td>
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<tr>
<td>Total direct cost and indirect cost components</td>
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<tr>
<td>Developer’s profit cost component</td>
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<tr>
<td>Developer’s profit margin</td>
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<td></td>
<td>10%</td>
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<td>Developer’s profit cost component (rounded)</td>
<td></td>
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<td></td>
<td></td>
<td>365,000</td>
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<tr>
<td>Total direct costs and indirect costs plus developer’s profit</td>
<td></td>
<td></td>
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<td></td>
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<td>4,017,000</td>
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<tr>
<td>Entrepreneurial incentive</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>161,000</td>
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<tr>
<td>Estimated total workforce replacement period</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 months</td>
<td></td>
<td></td>
<td>4,178,000</td>
</tr>
<tr>
<td>Estimated average workforce replacement cost investment (i.e., $4,017,000 total cost ÷ 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$2,009,000</td>
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<tr>
<td>Required annual return on investment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16%</td>
<td></td>
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<td></td>
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<tr>
<td>Required return on investment for 6 month replacement period</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8%</td>
<td></td>
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</tr>
<tr>
<td>Entrepreneurial incentive (i.e., $2,009,000 × 8% (rounded)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$161,000</td>
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<tr>
<td>Total replacement cost new</td>
<td></td>
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<td></td>
<td>4,178,000</td>
</tr>
</tbody>
</table>
Replacement Cost New – Direct Costs and Indirect Costs

- The RCN estimate considers the total compensation paid to each employee, labeled as “average salary.” These costs are direct costs.

- The RCN estimate considers all of the other expenses that the entity incurs related to each employee. These costs are indirect costs, including:
  1. payroll taxes
  2. employee benefits
  3. continuing professional education
  4. annual license and credential fees
  5. uniforms and lab coats
  6. employee parties, gifts, etc.
The total annual cost that the entity pays for an employee is called the full absorption cost. This full absorption cost includes:

1. the compensation paid by the employer to the employee and
2. the expenses paid by the employer to others so that the employee can perform his or her job.
Replacement Cost New – Direct Costs and Indirect Costs (cont.)

- The RCN includes all of the costs that the employer would incur to replace the current workforce with a brand new (but comparable) workforce. These costs may include:
  1. advertising for recruiting potential new employees to apply for each position
  2. interviewing expenses, background checks and other pre-employment tests, and placement fees incurred to have the new employee show up on day one
  3. on-the-job training in the particular position including first month training, first year training, and accumulated continuing education for long-term employees
Replacement Cost New – Direct Costs and Indirect Costs (cont.)

- There are two additional cost components to consider:
  1. developer’s profit and
  2. entrepreneurial incentive.
Replacement Cost New – Developer’s Profit and Entrepreneurial Incentive

- The developer’s profit considers the profit margin that a management consulting, human resources outsourcing, or professional staffing firm would earn if a willing buyer retained such a firm to create the assembled workforce.
- Likewise, the operating business owners would expect to earn a profit on the sale of their internally developed assets to the willing buyer.
- There are several alternative procedures for estimating entrepreneurial incentive.
- A common procedure is to estimate the lost profits opportunity cost that the entity would experience during the intangible asset replacement period.
Replacement Cost New – Developer’s Profit and Entrepreneurial Incentive (cont.)

- When using this procedure, the analyst should appropriately allocate the entity’s overall profit to all of the intangible assets.
- Let’s assume that the subject operating business has five intangible assets. The entrepreneurial incentive should be allocated among the five intangible assets.
- Another common entrepreneurial profit measurement procedure is to calculate a fair rate of return on the total intangible asset cost components (i.e., direct costs, indirect costs, and developer’s profit).
- The assembled workforce RCN is the sum of all four cost components.
Illustrative Depreciation Considerations

• In order to reach a value conclusion, the analyst next estimates the workforce RCNLD. As in any cost approach analysis, the analyst considers if there is any deterioration or obsolescence related to this intangible asset.

• From the valuation due diligence, the analyst learns the following facts:
  1. two of the entity’s managers are scheduled to retire in the next year or so
  2. one of the entity’s admin staff is out on disability leave and is not expected to return to work
  3. the entity is overstaffed with regard to administrative staff; in addition to the admin on disability leave, any willing buyer would eliminate two of the administrative positions
  4. the entity has experienced very low turnover of the manager staff; because of long tenure, these managers earn an average annual salary of $60,000; if the actual managers were replaced, they would be replaced with adequately qualified (but less tenured) employees earning an average annual salary of $50,000
## Trained and Assembled Workforce

### Physical Deterioration

As of 1/1/15

<table>
<thead>
<tr>
<th>Workforce Components</th>
<th>No. of Employees</th>
<th>Average Direct and Indirect Replacement Cost New</th>
<th>Total Direct and Indirect Replacement Cost New</th>
<th>Developer’s Profit and Entrepreneurial Incentive Cost Components</th>
<th>Total Replacement Cost New</th>
<th>Percent Depreciation</th>
<th>Accumulated Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>2</td>
<td>$45,000</td>
<td>$90,000</td>
<td>$13,000</td>
<td>$103,000</td>
<td>100%</td>
<td>$103,000</td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>1</td>
<td>22,400</td>
<td>22,400</td>
<td>3,200</td>
<td>25,600</td>
<td>100%</td>
<td>25,600</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16,200</td>
<td>128,600</td>
<td></td>
<td></td>
<td></td>
<td>$128,600</td>
</tr>
</tbody>
</table>
### Trained and Assembled Workforce Functional Obsolescence

As of 1/1/15

<table>
<thead>
<tr>
<th>Workforce Components</th>
<th>No. of Employees</th>
<th>Excess Direct and Indirect Replacement Cost New</th>
<th>Excess Developer’s Profit and Entrepreneurial Incentive Cost Components</th>
<th>Excess Total Replacement Cost New</th>
<th>Functional Obsolescence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>18</td>
<td>$7,500</td>
<td>$1,100</td>
<td>$8,600</td>
<td>$154,800</td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>2</td>
<td>22,400</td>
<td>3,200</td>
<td>25,600</td>
<td>51,200</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$206,000</td>
</tr>
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Trained and Assembled Workforce
Replacement Cost New Less Depreciation Method
As of 1/1/15

<table>
<thead>
<tr>
<th>Cost Approach Analysis</th>
<th>Cost Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement cost new (all employees)</td>
<td>$4,178,000</td>
</tr>
<tr>
<td>Less: Physical deterioration allowance (inadequate staff)</td>
<td>128,600</td>
</tr>
<tr>
<td>Less: Functional obsolescence allowance (superadequate staff)</td>
<td>206,000</td>
</tr>
<tr>
<td>Equals: Replacement cost new less depreciation</td>
<td>$3,843,400</td>
</tr>
</tbody>
</table>

- This RCNLD conclusion indicates what a willing buyer would pay to a willing seller for this assembled workforce, assuming that there is no economic obsolescence related to this intangible asset.
Trained and Assembled Workforce
Economic Obsolescence
As of 1/1/15

Selected Economic Obsolescence Data
As of December 31, 2014

<table>
<thead>
<tr>
<th>Item</th>
<th>Financial or Operational Performance Metric</th>
<th>LTM Ended 12/31/14</th>
<th>Benchmark Measure</th>
<th>LTM Percent Shortfall</th>
<th>Benchmark Comparison Reference Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Average collected revenue per executive</td>
<td>$340,000</td>
<td>$420,000</td>
<td>19%</td>
<td>2014 industry average</td>
</tr>
<tr>
<td>2</td>
<td>Number of support staff per executive</td>
<td>4.0</td>
<td>3.2</td>
<td>25%</td>
<td>2014 industry average</td>
</tr>
<tr>
<td>3</td>
<td>Average salary per executive</td>
<td>$180,000</td>
<td>$220,000</td>
<td>18%</td>
<td>2014 industry average</td>
</tr>
<tr>
<td>4</td>
<td>Annual growth rate in the entity revenue</td>
<td>3.5%</td>
<td>4.5%</td>
<td>22%</td>
<td>actual subject entity average for 2010-14</td>
</tr>
<tr>
<td>5</td>
<td>Profit contribution per executive (pre-owner comp)</td>
<td>$200,000</td>
<td>$280,000</td>
<td>29%</td>
<td>2014 industry average</td>
</tr>
<tr>
<td>6</td>
<td>Profit contribution margin (pre-owner comp)</td>
<td>59%</td>
<td>67%</td>
<td>12%</td>
<td>2014 industry average</td>
</tr>
<tr>
<td>7</td>
<td>Average clients seen per executive per day</td>
<td>8.2</td>
<td>10</td>
<td>18%</td>
<td>the 2014 subject entity budget</td>
</tr>
<tr>
<td>8</td>
<td>Average revenue billed per client visit</td>
<td>$80</td>
<td>$100</td>
<td>20%</td>
<td>the 2014 subject entity budget</td>
</tr>
<tr>
<td>9</td>
<td>Return on the entity average assets</td>
<td>10%</td>
<td>12.5%</td>
<td>20%</td>
<td>actual subject entity average for 2010-14</td>
</tr>
<tr>
<td>10</td>
<td>Return on the entity average equity</td>
<td>20%</td>
<td>25%</td>
<td>20%</td>
<td>actual subject entity average for 2010-14</td>
</tr>
</tbody>
</table>

LTM benchmark measures percent shortfall:
- mean 20.3%
- median 20.0%
- mode 20.0%
- trimmed mean 20.3%
- trimmed median 20.0%

Economic obsolescence indication 20%
## Trained and Assembled Workforce Economic Obsolescence Allowance As of 1/1/15

<table>
<thead>
<tr>
<th>Cost Approach Analysis</th>
<th>Cost Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement cost new less depreciation</td>
<td>$3,843,400</td>
</tr>
<tr>
<td>Times: Selected economic obsolescence percent</td>
<td>20%</td>
</tr>
<tr>
<td>Equals: Economic obsolescence allowance (rounded)</td>
<td>$768,700</td>
</tr>
</tbody>
</table>
Trained and Assembled Workforce
Cost Approach Valuation Synthesis and Conclusion
As of 1/1/15

<table>
<thead>
<tr>
<th>Cost Approach Analysis</th>
<th>Cost Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement cost new</td>
<td>$4,178,000</td>
</tr>
<tr>
<td>less: Physical deterioration allowance</td>
<td>128,600</td>
</tr>
<tr>
<td>Less: Functional obsolescence allowance</td>
<td>206,000</td>
</tr>
<tr>
<td>Less: Economic obsolescence allowance</td>
<td>768,700</td>
</tr>
<tr>
<td>Equals: Replacement cost new less depreciation</td>
<td>3,074,700</td>
</tr>
<tr>
<td>Assembled workforce value (rounded)</td>
<td>$3,100,000</td>
</tr>
</tbody>
</table>

- This $3.1 million intangible asset value would be extracted from the $30 million subject property value.
CATV Customer Relationships Illustrative Valuation Example

Income Approach – Yield Capitalization Method

- Illustrative fact set
  - The assessor valued all of the local CATV system RE and TPP at $10 million using a unit valuation method, based on various valuation pricing multiples extracted from the sales of other going-concern CATV systems.
  - The analyst will estimate the value of the system customer relationships to extract that value from the total assessment.
  - The assessment includes the value of intangible assets.
  - The analyst selected the income approach.
  - The analyst selected the multiperiod excess earnings method (MEEM).
  - The valuation date is 1/1/15.
<table>
<thead>
<tr>
<th>Projection Variable</th>
<th>Selected Valuation Variable Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CATV system 2015 budgeted revenue</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Budgeted residential customer revenue</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Budgeted commercial customer revenue</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Annual revenue growth rates</td>
<td>Prepared in consultation with management</td>
</tr>
<tr>
<td>Customer attrition rate</td>
<td>Based on average of actual monthly attrition rates for 2011-2014</td>
</tr>
<tr>
<td>Remaining useful life</td>
<td>Years until the remaining revenue is less than 5% of current revenue</td>
</tr>
<tr>
<td>EBITDA margin %</td>
<td>Based on average of 2011-2014, normalized to exclude the new customer selling expense</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>15% of revenue, based on average of 2011-2014</td>
</tr>
<tr>
<td>Amortization expense</td>
<td>5% of revenue, based on average of 2011-2014</td>
</tr>
<tr>
<td>Income tax rate</td>
<td>Market participant effective income tax rate</td>
</tr>
<tr>
<td>Projection Variable</td>
<td>Selected Valuation Variable Basis</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Contributory asset charges:</td>
<td>Working capital balance = 10% of revenue, based on 2011-2014 average; capital charge % = WACC</td>
</tr>
<tr>
<td>Working capital charge</td>
<td>Tangible asset value = $4,800,000 based on RCNLD analysis of real estate and tangible personal property; $4,800,000 = 80% of total revenue; capital charge % = WACC</td>
</tr>
<tr>
<td>Tangible asset charge</td>
<td>Intangible asset value = $2,000,000, based on appraisals of software, trademarks, technology, and workforce; capital charge % = WACC; $200,000 capital charge = 3% of total revenue</td>
</tr>
<tr>
<td>Intangible asset charge</td>
<td></td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>capx = 105% of depreciation expense, based on management projections; consistent with historical 10-year average</td>
</tr>
<tr>
<td>Working capital change</td>
<td>Based on projected annual change in working capital balance; the balance is based on 10% of remaining customer revenue</td>
</tr>
<tr>
<td>Discount period</td>
<td>Midyear discounting convention is assumed</td>
</tr>
<tr>
<td>Discount rate</td>
<td>Based on WACC</td>
</tr>
</tbody>
</table>
### CATV System

#### Residential Customer Relationships Valuation

**As of January 1, 2015**

| Year | Total residential customer revenue | Residential revenue growth rate | Residential customer attrition rate | Remaining customer revenue % | Remaining customer revenue | Normalized EBITDA margin % | EBITDA | Depreciation/amortization expense (% of revenue) | EBIT | Income taxes @ 40% | After-tax operating income | Less: Contributory asset charges | Total capital charge | + Depreciation/amortization expense | Capital expenditures | + Working capital decrease | = Net cash flow from remaining customers | Discount period | Present value factor @ 10% | Present value of remaining customer cash flow | Total present value of remaining customer cash flow |
|------|-----------------------------------|--------------------------------|----------------------------------|-----------------------------|--------------------------|--------------------------|----------------|-----------------------------------------------|------|-------------------|-----------------------------|------------------------|--------------------------|--------------------------------|------------------------|-----------------------------|-------------------------|-----------------------------|
| 1    | $4,000,000                        | 4%                             | 24%                              | 76.0%                       | 3,040,000                | 60%                      | 1,824,000     | 20%                                          | 1,216,000       | 486,400           | 729,600                     | 30,400                 | 364,800                  | 608,000                        | 478,800                | (96,000)                    | 590,000                  | 0.5                         | 0.9524                     | 561,916                | $1,904,929                  |
| 2    | 4,160,000                         | 4%                             | 24%                              | 57.8%                       | 2,404,482                | 60%                      | 1,442,688     | 20%                                          | 1,121,800       | 384,717            | 577,075                     | 24,045                 | 288,537                  | 480,896                        | 378,706                | (63,552)                    | 454,280                  | 1.5                         | 0.8658                     | 393,316                | 393,316                     |
| 3    | 4,326,400                         | 4%                             | 24%                              | 43.9%                       | 1,899,290                | 60%                      | 1,139,574     | 20%                                          | 862,596         | 303,886            | 455,830                     | 18,993                 | 227,915                  | 379,858                        | 299,139                | (50,519)                    | 359,153                  | 2.5                         | 0.7871                     | 282,689                | 282,689                     |
| 4    | 4,499,456                         | 4%                             | 24%                              | 33.4%                       | 1,502,818                | 60%                      | 713,146       | 20%                                          | 500,000         | 240,451            | 425,705                     | 501,691                | 236,694                  | 300,564                        | 237,715                | (39,242)                    | 283,455                  | 3.5                         | 0.7155                     | 202,812                | 202,812                     |
| 5    | 4,679,434                         | 4%                             | 24%                              | 25.5%                       | 1,188,576                | 60%                      | 173,146       | 20%                                          | 300,000         | 190,172            | 229,237                     | 151,943                | 187,200                  | 379,858                        | 187,851                | (21,107)                    | 177,560                  | 4.5                         | 0.6505                     | 146,083                | 146,083                     |
| 6    | 4,866,612                         | 4%                             | 24%                              | 19.3%                       | 939,256                  | 60%                      | 563,554       | 20%                                          | 210,000         | 150,281            | 176,845                     | 75,143                 | 116,054                  | 479,431                        | 147,371                | (16,376)                    | 137,542                  | 5.5                         | 0.5914                     | 105,009                | 105,009                     |
| 7    | 5,012,610                         | 3%                             | 24%                              | 14.7%                       | 736,854                  | 60%                      | 442,112       | 20%                                          | 452,020         | 117,896            | 90,262                      | 91,943                 | 110,054                  | 375,703                        | 114,618                | (12,107)                    | 85,560                   | 6.5                         | 0.5376                     | 75,253                 | 75,253                      |
| 8    | 5,162,988                         | 3%                             | 24%                              | 11.1%                       | 573,092                  | 60%                      | 343,855       | 20%                                          | 350,555         | 91,695             | 71,193                      | 90,281                 | 71,193                   | 294,741                        | 90,404                 | (10,146)                    | 67,111                   | 7.5                         | 0.4887                     | 53,514                 | 53,514                      |
| 9    | 5,317,878                         | 3%                             | 24%                              | 8.5%                        | 452,020                  | 60%                      | 271,212       | 20%                                          | 142,222         | 72,323             | 56,089                      | 72,323                 | 55,212                   | 229,237                        | 70,111                 | (7,412)                     | 52,335                   | 8.5                         | 0.4433                     | 44,231                 | 44,231                      |
| 10   | 5,477,414                         | 3%                             | 24%                              | 6.4%                        | 350,555                  | 60%                      | 210,333       | 20%                                          | 110,578         | 44,231             | 36,162                      | 44,231                 | 43,540                   | 294,741                        | 55,289                 | (10,146)                    | 44,231                   | 9.5                         | 0.4039                     | 19,217                 | 19,217                      |
| 11   | 5,641,737                         | 3%                             | 24%                              | 4.9%                        | 276,445                  | 60%                      | 165,867       | 20%                                          |                         |                   |                            |                            |                          |                                |                          |                            |                            |                            |                            |                            |

**Value of residential customer relationships (rounded)** $1,900,000
### CATV System
Customer Relationships Valuation
Residential Customer Turnover Rates

<table>
<thead>
<tr>
<th>Month</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>2.46%</td>
<td>2.08%</td>
<td>2.00%</td>
<td>2.10%</td>
</tr>
<tr>
<td>February</td>
<td>1.76%</td>
<td>1.93%</td>
<td>2.02%</td>
<td>1.94%</td>
</tr>
<tr>
<td>March</td>
<td>2.05%</td>
<td>2.04%</td>
<td>2.05%</td>
<td>2.08%</td>
</tr>
<tr>
<td>April</td>
<td>1.91%</td>
<td>2.01%</td>
<td>2.01%</td>
<td>2.08%</td>
</tr>
<tr>
<td>May</td>
<td>2.06%</td>
<td>1.98%</td>
<td>2.10%</td>
<td>1.95%</td>
</tr>
<tr>
<td>June</td>
<td>1.95%</td>
<td>1.99%</td>
<td>2.09%</td>
<td>2.00%</td>
</tr>
<tr>
<td>July</td>
<td>1.92%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>1.78%</td>
</tr>
<tr>
<td>August</td>
<td>2.26%</td>
<td>2.05%</td>
<td>2.03%</td>
<td>2.00%</td>
</tr>
<tr>
<td>September</td>
<td>1.96%</td>
<td>2.02%</td>
<td>2.09%</td>
<td>2.11%</td>
</tr>
<tr>
<td>October</td>
<td>2.20%</td>
<td>2.10%</td>
<td>2.01%</td>
<td>2.03%</td>
</tr>
<tr>
<td>November</td>
<td>1.87%</td>
<td>2.00%</td>
<td>1.93%</td>
<td>1.86%</td>
</tr>
<tr>
<td>December</td>
<td>1.56%</td>
<td>2.01%</td>
<td>1.90%</td>
<td>1.85%</td>
</tr>
</tbody>
</table>

**Annual Customer Turnover Rate**  
24.0%  24.2%  24.2%  23.8%
## CATV System
### Residential Customer Relationships Valuation
#### Normalized EBITDA Margin Analysis

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Mean</th>
<th>Median</th>
<th>Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported EBITDA margin %</td>
<td>58.2</td>
<td>58.0</td>
<td>57.6</td>
<td>58.2</td>
<td>58.0</td>
<td>58.0</td>
<td>58.0</td>
<td>58.0</td>
</tr>
<tr>
<td>+ New customer selling expense %</td>
<td>2.0</td>
<td>2.2</td>
<td>2.4</td>
<td>2.2</td>
<td>2.0</td>
<td>2.2</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>= Normalized EBITDA margin %</td>
<td>60.2</td>
<td>60.2</td>
<td>60.0</td>
<td>60.4</td>
<td>60.0</td>
<td>60.2</td>
<td>60.2</td>
<td>60%</td>
</tr>
</tbody>
</table>

New customer selling expense includes advertising directed to new customers and new customer promotion expense.
<table>
<thead>
<tr>
<th>CATV System</th>
<th>Depreciation/Amortization Expense</th>
<th>Capital Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
</tr>
<tr>
<td>Remaining customer revenue</td>
<td>3,040,000</td>
<td>2,404,480</td>
</tr>
<tr>
<td>Depreciation expense (% of revenue)</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>456,000</td>
<td>360,672</td>
</tr>
<tr>
<td>Amortization expense (% of revenue)</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Amortization expense</td>
<td>152,100</td>
<td>120,224</td>
</tr>
<tr>
<td>Deprecation &amp; amortization expense</td>
<td>608,000</td>
<td>480,896</td>
</tr>
<tr>
<td>Capx % of depreciation expense</td>
<td>105%</td>
<td>105%</td>
</tr>
<tr>
<td>Capx</td>
<td>478,800</td>
<td>378,706</td>
</tr>
</tbody>
</table>
### CATV System
Contributory Asset Charge
Intangible Assets
($000s)

<table>
<thead>
<tr>
<th>Contributory Intangible Assets</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer software</td>
<td>500,000</td>
</tr>
<tr>
<td>Trademarks</td>
<td>500,000</td>
</tr>
<tr>
<td>Proprietary technology</td>
<td>500,000</td>
</tr>
<tr>
<td>Assembled workforce</td>
<td>500,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,000,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contributory Intangible Asset Capital Charge</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributory intangible assets</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Return on contributory assets</td>
<td>10%</td>
</tr>
<tr>
<td>Contributory intangible asset capital charge</td>
<td>200,000</td>
</tr>
</tbody>
</table>

+ Total CATV System revenue                      | 6,000,000|
= Contributory intangible asset capital charge as a % of customer revenue | 3%
CATV Customer Relationships—Note Regarding Commercial Customer Relationships

- The analyst also valued the CATV commercial customer relationships (that are budgeted to generate $2,000,000 in next year revenue).
- The analyst used the same income approach and the same MEEM method.
- Due to time constraints, this analysis is not presented here.
- The analyst concluded a value for the commercial customer relationships to be $800,000.
CATV Customer Relationships
Illustrative Example - Conclusion

- The assessor valued the total operating property at $10,000,000.
- The analyst valued the residential customer relationships at $1,900,000, the commercial customer relationships at $800,000, and the other identifiable intangible assets at $2,000,000.
- The taxpayer will extract the $4,700,000 intangible asset value from the $10,000,000 proposed assessment, to conclude a value of the taxable RE and TPP of $5,300,000.
- We recall the analyst concluded that the RCNLD of the RE and TPP was $4,800,000.
- The difference between the $4,800,000 RCNLD and the $5,300,000 residual from total property assessment (i.e., $500,000) is probably the goodwill/going concern value of the subject CATV business.
Knowledge Check 4

- Which of the following is a common income approach intangible asset valuation method?
  A. Business enterprise value method
  B. Capitalization of net rental income method
  C. Residual (or excess) income method
  D. Relief from royalty method
Knowledge Check 4

- Which of the following is a common income approach intangible asset valuation method?
  A. Business enterprise value method
  B. Capitalization of net rental income method
  C. Residual (or excess) income method
  D. Relief from royalty method
Intangible Asset Extraction

Procedures

- There are two common procedures to extract intangible asset values from total operating property values
  - Direct subtraction method
  - Transfer price (income allocation) method
- The direct subtraction method is easiest to understand:
  - Synthesized total value of operating property (based on any/all valuation approaches)
  - minus: Synthesized value of all identifiable intangible assets (based on any/all valuation approaches)
  - equals: Residual value of RE and TPP (and possibly some operating business goodwill/going concern value)
Intangible Asset Extraction Procedures (cont.)

- The transfer price (income allocation) method assumes the following:
  - The subject operating entity is split into two entities:
    - One entity operates the subject RE and TPP
    - One entity holds the intangible assets and licenses those intangible assets (at an arm’s-length price—or ALP) to the operating company
Intangible Asset Extraction Procedures (cont.)

- Let’s construct a simple hypothetical example:
  - The Taxpayer Company Refinery (“Refinery”) is assessed at $1,000,000,000
  - The assessor used several income approach methods and sales comparison approach methods to reach that assessment
  - Internally developed computer software is an important intangible asset at the Refinery
  - Intangible assets are exempt from property taxation in the subject jurisdiction
  - The analyst values the Refinery computer software on the next slide
  - To simplify the example, let’s ignore all other exempt intangible assets
## Taxpayer Refinery Computer Software Value

**Cost Approach – Replacement Cost New less Depreciation (RCNLD) Method**

<table>
<thead>
<tr>
<th>Computer Software System</th>
<th>Estimated Software Development Effort—in Person Months</th>
<th>Elapsed Time to Develop Replacement Software—in Calendar Months</th>
<th>Full Absorption Cost per Person $</th>
<th>Indicated RCNLD Method Component $000</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS/400</td>
<td>4,531</td>
<td>29</td>
<td>$14,585</td>
<td>66,100</td>
</tr>
<tr>
<td>Refinery operations</td>
<td>575</td>
<td>25</td>
<td>$14,585</td>
<td>8,400</td>
</tr>
<tr>
<td>Tandem</td>
<td>3,304</td>
<td>16</td>
<td>$14,585</td>
<td>48,200</td>
</tr>
<tr>
<td>Unisys</td>
<td>1,229</td>
<td>5</td>
<td>$14,585</td>
<td>17,900</td>
</tr>
<tr>
<td>Pioneer</td>
<td>1,807</td>
<td>41</td>
<td>$14,585</td>
<td>26,400</td>
</tr>
<tr>
<td>Voyager</td>
<td>325</td>
<td>12</td>
<td>$14,585</td>
<td>4,700</td>
</tr>
<tr>
<td>Host to Host</td>
<td>85</td>
<td>9</td>
<td>$14,585</td>
<td>1,200</td>
</tr>
</tbody>
</table>

**Total direct and indirect costs component (rounded)**: 11,856 person months, 24 calendar months

11,856 * $14,585 = $172,900

Plus: Developer’s profit, at 16%

27,700

Subtotal: 200,600

Plus: Entrepreneurial incentive, based on 2 years lost income

31,200

Equals: Total replacement cost new

231,800

Less: Functional obsolescence, based on software replacement plans

36,900

Equals: Subtotal

194,900

Less: Economic obsolescence, at 19%, based on income shortfall analysis

37,000

Equals: Computer software RCNLD

157,900

Computer software value (rounded)

$160,000
Taxpayer Refinery Extraction of Intangible Asset Value—Direct Subtraction

- Direct subtraction analysis

$1,000,000,000 synthesized value of Taxpayer Refinery total operating assets
less: $160,000,000 value of Taxpayer Refinery computer software
equals: $840,000,000 residual value of Taxpayer Refinery RE and TPP
(assuming no other intangible assets)
Taxpayer Refinery Extraction of Intangible Asset Value—Direct Subtraction

- Assessor valuation of Taxpayer Refinery total assets

<table>
<thead>
<tr>
<th>Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income approach – yield capitalization method [a]</td>
<td>$1,100,000,000</td>
</tr>
<tr>
<td>Income approach – direct capitalization method [b]</td>
<td>$900,000,000</td>
</tr>
<tr>
<td>Sales comparison approach value indication – direct sales comparison method [c]</td>
<td>$960,000,000</td>
</tr>
</tbody>
</table>

Valuation synthesis and conclusion – assessor concludes reconciled value of $1,000,000,000 for Refinery total assets

Notes:
[a] Based on present value of Refinery total net cash flow
[b] Based on direct capitalization of Refinery total net operating income
[c] Based on comparable sales of other operating refineries and market-derived income pricing multiples
Taxpayer Refiner Extraction of Intangible Asset Value—Direct Subtraction (cont.)

minus

- Valuation of Taxpayer Refinery intangible assets
  - Value of intangible assets
    
    Cost approach value indication – RCNLD method
    $160,000,000

- Valuation of Taxpayer Refinery assessable RE and TPP

equals

= Value of tangible assets

Valuation synthesis and conclusion – residual value of $840,000,000 for Refinery assessable assets
Taxpayer Refinery Extraction of Intangible Asset Value – Income Allocation

- **Transfer price (income allocation)**
  1. $160,000,000 value of Refinery computer software \times 12.5\% fair rate of return on Refinery computer software $20,000,000 annual transfer price (a.k.a. capital charge or license royalty) for the use of the computer software
  2. The fair return can be the taxpayer WACC or some other industry/taxpayer ROI measure
  3. The $20,000,000 transfer price (or economic rent) is subtracted from the Refinery net operating income or net cash flow included in any income approach analysis or any sales comparison approach analysis
  4. The Refinery income is reduced by the “rent” of the software, so the Refinery value is reduced by the value of the software
  5. This transfer price is illustrated on the following slide
Taxpayer Refinery Extraction of Intangible Asset Value – Income Allocation (cont.)

Taxpayer Refinery operating entity uses the “licensed” software

Hypothetical Holdco owns the $160 million of software and licenses the software to Taxpayer Refinery

$20M per year “rent” to operate the software

hypothetical Refinery operating company owns all taxable RE and TPP only

hypothetical intangible asset holding company owns all exempt intangible assets
Taxpayer Refinery Extraction of Intangible Asset Value—Income Allocation

- Based on “rent” of software from the hypothetical intangible asset holding company, the Refinery income (e.g., net cash flow, net operating income, EBIT, or EBITDA) is reduced by $20,000,000 per year.

- The taxpayer applies the same Refinery total asset valuation approaches and methods that the assessor used, but with lower income metrics.
Taxpayer Refinery Extraction of Intangible Asset Value—Income Allocation

- Revised valuation of Taxpayer Refinery total assets

- **Income approach value indication – yield capitalization method [a]**
  - $950,000,000

- **Income approach value indication – direct capitalization method [b]**
  - $750,000,000

- **Sales comparison approach value indication – direct sales comparison method [c]**
  - $800,000,000

Revised valuation synthesis and conclusion – taxpayer concludes reconciled value of $840,000,000 for Refinery total assets

Notes:
[a] Excludes net cash flow related to fair return on Refinery software.  
[b] Excludes net operating income related to fair return on Refinery software.  
[c] Excludes EBITDA related to fair return on Refinery software.
Taxpayer Refinery Extraction of Intangible Asset Value – Income Allocation (cont.)

- No additional adjustments are needed to extract the intangible asset value because the intangible asset-related income is already excluded from the total asset value.
Knowledge Check 5

Which of the following are common methods for extracting intangible asset values from the total property value?

A. The direct subtraction method and the transfer price (income allocation) method
B. The capitalized excess earnings method and the residual from business enterprise value method
C. The yield capitalization method and the direct capitalization method
D. The valuation synthesis and conclusion method and the reconciliation method
Knowledge Check 5

Which of the following are common methods for extracting intangible asset values from the total property value?

A. The direct subtraction method and the transfer price (income allocation) method
B. The capitalized excess earnings method and the residual from business enterprise value method
C. The yield capitalization method and the direct capitalization method
D. The valuation synthesis and conclusion method and the reconciliation method
Intangible Assets and Property Tax – Final Considerations

- When the operating property assessment is based on business operating income, operating business discount/capitalization rates, or operating business sale pricing multiples, then extract the value of the subject property identifiable intangible assets by either
  - the direct subtraction method or
  - the transfer price (income allocation) method
Intangible Assets and Property Tax – Final Considerations (cont.)

- To avoid the intangible asset extraction issue, value the subject operating property so as to exclude the value of intangible assets.

- To exclude intangible assets in the property valuation, be sure to use:
  - property rental income only (not operating business income)
  - property-specific discount/capitalization rates (not operating business discount/capitalization rates)
  - sales of in-place (but not in-use) properties only (i.e., nonoperating refineries, race tracks, mines, hotels, bowling alleys, restaurants, etc.)
Intangible Assets and Property Tax – Final Considerations (cont.)

- Alternatively, to exclude intangible assets in the property valuation:
  - rely on cost approach valuation methods—and include RE and TPP only in the cost components analysis—but be careful to consider the value of intangible assets in any economic obsolescence analysis
Key Points

- Economic benefits of intangible assets do not come from their physical substance however they do have a specific identification and recognizable description.
- Intangible assets include items such as trademarks, trade names, trade dress, domain names, customer lists and customer contracts.
- Many taxing jurisdictions exempt some or all intangible personal property from property taxation.
- Intangible assets are typically valued using the summation (individual property) valuation methods or unit (collective property) valuation methods. Unless the assessor or taxpayer makes an effort to extract the taxpayer intangible assets, valuation approaches will capture intangible assets.
- To extract intangible assets from an assessment, replacement cost new less depreciation including developers profit and entrepreneurial incentive must be calculated.
- Intangible assets can be extracted using the direct subtraction method or the transfer price method.
Questions and Discussion