



Institute for Professionals in Taxation - 2015 Healthcare Seminar

Valuation and Allocation of Intangible Assets
in Healthcare Industry Properties

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Robert Reilly has been a managing director of Willamette Management Associates for 24 years. Willamette provides valuation, forensic analysis, and financial opinion services for transaction, financing, taxation, bankruptcy, litigation, and accounting purposes. Prior to Willamette, Robert was a valuation partner for the Deloitte & Touche accounting firm. Robert specializes in the valuation, damages, and transfer price analysis of 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 degree in economics and an MBA degree 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.

Robert is the co-author of 12 valuation books including *Guide to Intangible Asset Valuation* (revised edition published in 2014 by the AICPA), *Practical Guide to Bankruptcy Valuation* (published in 2013 by the American Bankruptcy Institute), and *Guide to Property Tax Valuation*.



Discussion Outline

- What is—and what is not—an intangible asset
- Examples of health care property intangible assets and intellectual property
- Common reasons to value health care intangible assets
- Intangible asset property taxation considerations
- Generally accepted intangible asset valuation approaches and methods
- Methods for intangible asset extraction from the total property value
- Intangible asset valuation illustrative examples
- Intangible asset extraction illustrative examples
- Summary and conclusion

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 as to 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.”

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. (For GAAP purposes, 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

Health Care Industry

Examples of Typical Intangible Assets

- Medical, dental, and other professional licenses
- Certificates of need
- Patient relationships
- Patent files and records (manual and electronic)
- Electronic medical records computer software
- Medical and administrative staff trained and assembled workforce
- Office systems, procedures, and manuals
- Position or “station” procedures and manuals
- Facility operating licenses and permits
- Physician (and other professional) employment agreements
- Physician (and other professional) noncompetition agreements
- Executive (and other administrator) employment agreements
- Executive (and other administrator) noncompetition agreements
- Administrative services agreements
- Medical (and other professional) services agreements
- Facility or function management agreements
- Equipment and other supplier purchase agreements
- Service marks and service names
- Joint venture agreements
- A professional’s personal goodwill
- An entity’s institutional goodwill
- Equipment use or license agreements
- Medical (other professional) staff privileges
- Joint development or promotion agreements
- Affiliation agreements



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 (or their advisors) should:
 - 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 Health Care Industry Property that Encompass Intangible Assets in the Assessment

- Some of the types of health care industry property that may encompass identifiable intangible assets includes:
 - general medical and surgical hospitals
 - psychiatric and substance abuse hospitals
 - specialty hospitals
 - ambulatory surgical and emergency centers
 - family planning centers
 - medical and diagnostic laboratories
 - diagnostic imaging centers
 - ambulance services
 - nursing and residential care facilities
 - residential mental retardation, mental health, and substance abuse facilities
 - continuing care retirement communities
 - urgent medical care centers and clinics
 - dialysis centers
 - physician walk-in centers and clinics
 - HMO medical centers

Why These Types of Property May Encompass Intangible Assets in the Property Tax Assessment

- 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 the 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) – based on a cost approach RCNLD analysis \$10,000,000
- intangible personal property (IPP) – based on a cost approach RCNLD analysis \$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 identifying economic obsolescence—not considering intangible assets

| | | | | |
|--|--|------------------------------------|---|---------------------|
| required ROI | | | | 10% |
| actual ROI | $\frac{\text{operating income}}{\text{RE} + \text{TPP RCNLD}}$ | $\frac{\$1,000,000}{\$10,000,000}$ | = | <u>10%</u> |
| income shortfall/economic obsolescence | | | | <u>0%</u> |
| value of RE and TPP (i.e., based on \$10,000,000 RCNLD) | | | | <u>\$10,000,000</u> |

Effect of Intangible Assets on Cost Approach Economic Obsolescence

- Simplified test for identifying economic obsolescence—considering intangible assets

required ROI 10%

actual ROI $\frac{\text{operating income}}{\text{RE} + \text{TPP} + \text{IPP RCNLD}} = \frac{\$1,000,000}{\$14,000,000} = 7.1\%$

income shortfall/economic obsolescence = $(10\% - 7.1\%) \div 10\%$ 29%

value of RE and TPP \$7,100,000
(i.e., based on \$10,000,000 RCNLD – 29% economic obsolescence)

Generally Accepted Intangible Asset Valuation Approaches and Methods

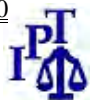
- Cost approach methods
 - Reproduction cost new less depreciation method
 - Replacement cost new less depreciation method
 - Trended historical cost less depreciation method
- Market approach methods
 - Relief from royalty method
 - Comparable uncontrolled transactions method
 - Comparable profit margin method
- Income approach methods
 - Differential income (with/without) method
 - Incremental income method
 - Profit split method (or residual profit split method)
 - Residual (excess) income method

Assembled Workforce Illustrative Valuation Example – Cost Approach, RCNLD Method

- Illustrative fact set
 - The valuation date is 1/1/15
 - The Alpha Ambulatory Surgical Center property operates with 50 employees
 - There are three principal staff levels; let's call them physicians, clinical staff (e.g., nurses), and administrative staff
 - The assessor valued the Alpha 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 Alpha assembled workforce to extract that value from the total assessment

Alpha Ambulatory Surgical Center Trained and Assembled Workforce, Replacement Cost New Less Depreciation Method as of 1/1/15

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



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.

Replacement Cost New – Direct Costs and Indirect Costs (cont.)

- 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 surgical center 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 clinical staff 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 clinical staff; because of long tenure, these clinical staff earn an average annual salary of \$60,000; if the actual nurses were replaced, they would be replaced with adequately qualified (but less tenured) nurses earning an average annual salary of \$50,000

Trained and Assembled Workforce Physical Deterioration As of 1/1/15

| <u>Workforce Components</u> | <u>No. of Employees</u> | <u>Average Direct and Indirect Replacement Cost New</u> | <u>Total Direct and Indirect Replacement Cost New</u> | <u>Developer's Profit and Entrepreneurial Incentive Cost Components</u> | <u>Total Replacement Cost New</u> | <u>Percent Depreciation</u> | <u>Accumulated Depreciation</u> |
|-----------------------------|-------------------------|---|---|---|-----------------------------------|-----------------------------|---------------------------------|
| Clinical Staff | 2 | \$45,000 | \$90,000 | \$13,000 | \$103,000 | 100% | \$103,000 |
| Administrative Staff | 1 | 22,400 | 22,400 | <u>3,200</u> | <u>25,600</u> | 100% | <u>25,600</u> |
| Total | | | | 16,200 | 128,600 | | <u>\$128,600</u> |

Trained and Assembled Workforce Functional Obsolescence As of 1/1/15

| <u>Workforce Components</u> | <u>No. of Employees</u> | <u>Excess Direct and Indirect Replacement Cost New</u> | <u>Excess Developer's Profit and Entrepreneurial Incentive Cost Components</u> | <u>Excess Total Replacement Cost New</u> | <u>Functional Obsolescence</u> |
|-----------------------------|-------------------------|--|--|--|--------------------------------|
| Clinical Staff | 18 | \$7,500 | \$1,100 | \$8,600 | \$154,800 |
| Administrative Staff | 2 | 22,400 | 3,200 | 25,600 | <u>51,200</u> |
| Total | | | | | <u>\$206,000</u> |

Alpha Ambulatory Surgical Center Trained and Assembled Workforce Replacement Cost New Less Depreciation Method As of 1/1/15

| Cost Approach Analysis | Cost Component |
|---|--------------------|
| Replacement cost new (all employees) | \$4,178,000 |
| Less: Physical deterioration allowance (inadequate staff) | 128,600 |
| Less: Functional obsolescence allowance (superadequate staff) | <u>206,000</u> |
| Equals: Replacement cost new less depreciation | <u>\$3,843,400</u> |

- This RCNLD conclusion indicates what a willing buyer would pay to a willing seller for this surgical center 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

| <u>Item</u> | <u>Financial or Operational Performance Metric</u> | <u>LTM Ended 12/31/14</u> | <u>Benchmark Measure</u> | <u>LTM Percent Shortfall</u> | <u>Benchmark Comparison Reference Source</u> |
|-------------|--|---------------------------|--------------------------|------------------------------|--|
| 1 | Average collected revenue per physician | \$500,000 | \$620,000 | 19% | 2014 industry average |
| 2 | Number of support staff per physician | 4.0 | 3.2 | 25% | 2014 industry average |
| 3 | Average salary per physician | \$180,000 | \$220,000 | 18% | 2014 industry average |
| 4 | Annual growth rate in the center revenue | 3.5% | 4.5% | 22% | actual subject entity average for 2010-14 |
| 5 | Profit contribution per physician (pre-owner comp) | \$200,000 | \$280,000 | 29% | 2014 industry average |
| 6 | Profit contribution margin (pre-owner comp) | 59% | 67% | 12% | 2014 industry average |
| 7 | Average patients seen per physician per day | 8.2 | 10 | 18% | the 2014 subject entity budget |
| 8 | Average revenue billed per patient procedure | \$8,000 | \$10,000 | 20% | the 2014 subject entity budget |
| 9 | Return on the surgical center average assets | 10% | 12.5% | 20% | actual subject entity average for 2010-14 |
| 10 | Return on the surgical center average equity | 20% | 25% | 20% | actual subject entity average for 2010-14 |

LTM benchmark measures percent shortfall:

| | |
|------------------|--------------|
| – mean | 20.3% |
| – median | 20.0% |
| – mode | 20.0% |
| – trimmed mean | 20.3% |
| – trimmed median | <u>20.0%</u> |

Economic obsolescence indication

20%



Trained and Assembled Workforce Economic Obsolescence Allowance As of 1/1/15

| <u>Cost Approach Analysis</u> | | <u>Cost Component</u> |
|-------------------------------|---|---------------------------|
| | Replacement cost new less depreciation | \$3,843,400 |
| Times: | Selected economic obsolescence percent | <u>20%</u> |
| Equals: | Economic obsolescence allowance (rounded) | <u>\$768,700</u> |

Alpha Ambulatory Surgical Center Trained and Assembled Workforce Cost Approach Valuation Synthesis and Conclusion As of 1/1/15

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

- This \$3.1 million intangible asset value would be extracted from the \$30 million surgical center property assessed value.

Beta Nursing Home Client Relationships

Illustrative Valuation Example

Income Approach – Yield Capitalization Method

- Illustrative fact set
 - The assessor valued all of the Beta Nursing Home 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 nursing homes
 - The analyst will estimate the value of the Beta residential client relationships in order to extract that value from the total property 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

Beta Nursing Home
Residential Client Relationships Valuation
Selected Valuation Variables
As of January 1, 2015

| Projection Variable | Selected Valuation Variable Basis |
|---------------------------------------|---|
| Total Beta 2015 budgeted revenue | \$6,000,000 |
| Budgeted residential patient revenue | \$4,000,000 |
| Budgeted hospice care patient revenue | \$2,000,000 |
| Annual revenue growth rates | Prepared in consultation with Beta management |
| Residential client attrition rate | Based on average of actual monthly attrition rates for 2011-2014 |
| Remaining useful life | Years until the remaining revenue is less than 5% of current revenue |
| EBITDA margin % | Based on average of 2011-2014, normalized to exclude the new customer selling expense |
| Depreciation expense | 15% of revenue, based on average of 2011-2014 |
| Amortization expense | 5% of revenue, based on average of 2011-2014 |
| Income tax rate | Market participant effective income tax rate |





| <u>Projection Variable</u> | <u>Selected Valuation Variable Basis</u> |
|-----------------------------|---|
| Contributory asset charges: | |
| Working capital charge | Working capital balance = 10% of revenue, based on 2011-2014 average; the capital charge % = WACC |
| Tangible asset charge | Tangible asset value = \$4,800,000 based on RCNLD analysis of real estate and tangible personal property; \$4,800,000 = 80% of total revenue; the capital charge % = WACC |
| Intangible asset charge | Intangible asset value = \$2,000,000, based on appraisals of software, trademarks, technology, and workforce; the capital charge % = WACC; the \$200,000 capital charge = 3% of total revenue |
| Capital expenditures | capx = 105% of depreciation expense, based on Beta management projections; this is consistent with historical 10-year average |
| Working capital change | Based on projected annual change in working capital balance; the balance is based on 10% of remaining residential client revenue |
| Discount period | Midyear discounting convention is assumed |
| Discount rate | Based on the Beta WACC |

Beta Nursing Home
Residential Client Relationships Valuation
As of January 1, 2015

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
|--|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Total residential client revenue | \$4,000,000 | 4,160,000 | 4,326,400 | 4,499,456 | 4,679,434 | 4,866,612 | 5,012,610 | 5,162,988 | 5,317,878 | 5,477,414 | 5,641,737 |
| Residential client revenue growth rate | | 4% | 4% | 4% | 4% | 4% | 3% | 3% | 3% | 3% | 3% |
| Residential client attrition rate | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% | 24% |
| Remaining client revenue % | 76.0% | 57.8% | 43.9% | 33.4% | 25.5% | 19.3% | 14.7% | 11.1% | 8.5% | 6.4% | 4.9% |
| Remaining client revenue | 3,040,000 | 2,404,482 | 1,899,290 | 1,502,818 | 1,188,576 | 939,256 | 736,854 | 573,092 | 452,020 | 350,555 | 276,445 |
| Normalized EBITDA margin % | 60% | 60% | 60% | 60% | 60% | 60% | 60% | 60% | 60% | 60% | 60% |
| EBITDA | 1,824,000 | 1,442,688 | 1,139,574 | 901,691 | 713,146 | 563,554 | 442,112 | 343,855 | 271,212 | 210,333 | 165,867 |
| Depreciation/amortization expense (% of revenue) | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Depreciation/amortization expense | 608,000 | 480,896 | 379,858 | 300,564 | 237,715 | 187,851 | 147,371 | 114,618 | 90,404 | 70,111 | 55,289 |
| EBIT | 1,216,000 | 961,792 | 759,716 | 601,127 | 475,431 | 375,703 | 294,741 | 229,237 | 180,808 | 140,222 | 110,578 |
| - Income taxes @ 40% | 486,400 | 384,717 | 303,886 | 240,451 | 190,172 | 150,281 | 117,896 | 91,695 | 72,323 | 56,089 | 44,231 |
| After-tax operating income | 729,600 | 577,075 | 455,830 | 360,676 | 285,259 | 225,422 | 176,845 | 137,542 | 108,485 | 84,133 | 66,347 |
| Less: Contributory asset charges | | | | | | | | | | | |
| - Working capital asset charge | 30,400 | 24,045 | 18,993 | 15,028 | 11,886 | 9,393 | 7,369 | 5,731 | 4,528 | 3,506 | 2,764 |
| - Tangible asset capital charge | 243,200 | 192,358 | 151,943 | 120,225 | 95,086 | 75,141 | 58,948 | 45,847 | 36,162 | 28,044 | 22,116 |
| - Intangible asset capital charge | 91,200 | 72,134 | 56,979 | 45,085 | 35,657 | 28,178 | 22,106 | 17,193 | 13,561 | 10,517 | 8,293 |
| Total capital charge | 364,800 | 288,537 | 227,915 | 180,338 | 142,629 | 112,712 | 88,423 | 68,771 | 54,243 | 42,067 | 33,173 |
| + Depreciation/amortization expense | 608,000 | 480,896 | 379,858 | 300,564 | 237,715 | 187,851 | 147,371 | 114,618 | 90,404 | 70,111 | 55,289 |
| - Capital expenditures | 478,800 | 378,706 | 299,139 | 236,694 | 187,200 | 147,932 | 116,054 | 90,262 | 71,193 | 55,212 | 43,540 |
| + Working capital decrease | (96,000) | (63,552) | (50,519) | (39,242) | (31,425) | (24,931) | (20,241) | (16,376) | (12,107) | (10,146) | (7,412) |
| = Net cash flow from remaining clients | 590,000 | 454,280 | 359,153 | 283,455 | 224,570 | 177,560 | 139,980 | 109,503 | 85,560 | 67,111 | 52,335 |
| Discount period | 0.5 | 1.5 | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | 9.5 | 10.5 |
| Present value factor @ 10% | 0.9524 | 0.8658 | 0.7871 | 0.7155 | 0.6505 | 0.5914 | 0.5376 | 0.4887 | 0.4443 | 0.4039 | 0.3672 |
| Present value of remaining clients cash flow | 561,916 | 393,316 | 282,689 | 202,812 | 146,083 | 105,009 | 75,253 | 53,514 | 38,014 | 27,106 | 19,217 |
| Total present value of remaining clients cash flow | 1,904,929 | | | | | | | | | | |
| Value of residential clients relationships (rounded) | <u>\$1,900,000</u> | | | | | | | | | | |



Beta Nursing Home
Residential Client Relationships Valuation
Residential Client Turnover Rates

| Month | 2011 | 2012 | 2013 | 2014 |
|-----------------------------|--------------|--------------|--------------|--------------|
| January | 2.46% | 2.08% | 2.00% | 2.10% |
| February | 1.76% | 1.93% | 2.02% | 1.94% |
| March | 2.05% | 2.04% | 2.05% | 2.08% |
| April | 1.91% | 2.01% | 2.01% | 2.08% |
| May | 2.06% | 1.98% | 2.10% | 1.95% |
| June | 1.95% | 1.99% | 2.09% | 2.00% |
| July | 1.92% | 2.00% | 2.00% | 1.78% |
| August | 2.26% | 2.05% | 2.03% | 2.00% |
| September | 1.96% | 2.02% | 2.09% | 2.11% |
| October | 2.20% | 2.10% | 2.01% | 2.03% |
| November | 1.87% | 2.00% | 1.93% | 1.86% |
| December | <u>1.56%</u> | <u>2.01%</u> | <u>1.90%</u> | <u>1.85%</u> |
| Annual Client Turnover Rate | 24.0% | 24.2% | 24.2% | 23.8% |



Beta Nursing Home
Residential Client Relationships Valuation
Normalized EBITDA Margin Analysis

| | 2010 | 2011 | 2012 | 2013 | 2014 | Mean | Median | Selected |
|--------------------------------|------------|------------|------------|------------|------------|------------|------------|----------|
| Reported EBITDA margin % | 58.2 | 58.0 | 57.6 | 58.2 | 58.0 | 58.0 | 58.0 | |
| + New client selling expense % | <u>2.0</u> | <u>2.2</u> | <u>2.4</u> | <u>2.2</u> | <u>2.0</u> | <u>2.2</u> | <u>2.2</u> | |
| = Normalized EBITDA margin % | 60.2 | 60.2 | 60.0 | 60.4 | 60.0 | 60.2 | 60.2 | 60% |

The new client selling expense includes (1) advertising directed to new residential clients and (2) new residential client promotion expense. These selling expenses are not necessary to retain the current population of residential clients.



Beta Nursing Home
 Depreciation/Amortization Expense
 Capital Expenditures
 (\$s)

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
|-------------------------------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Remaining client revenue | 3,040,000 | 2,404,480 | 1,899,290 | 1,502,818 | 1,188,576 | 939,256 | 736,854 | 573,092 | 452,020 | 350,555 | 276,445 |
| Depreciation expense (% of revenue) | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> | <u>15%</u> |
| Depreciation expense | 456,000 | 360,672 | 284,894 | 225,423 | 178,286 | 140,888 | 110,528 | 85,964 | 67,803 | 52,593 | 41,467 |
| Amortization expense (% of revenue) | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> | <u>5%</u> |
| Amortization expense | <u>152,100</u> | <u>120,224</u> | <u>94,965</u> | <u>75,141</u> | <u>59,429</u> | <u>46,963</u> | <u>36,843</u> | <u>28,655</u> | <u>22,601</u> | <u>17,528</u> | <u>13,822</u> |
| Deprecation & amortization expense | 608,000 | 480,896 | 379,859 | 300,564 | 23,775 | 187,851 | 147,371 | 114,619 | 90,404 | 70,111 | 55,289 |
| Capx - as % of depreciation expense | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> | <u>105%</u> |
| Capx | 478,800 | 378,706 | 299,139 | 236,694 | 187,200 | 147,932 | 116,054 | 90,262 | 71,193 | 55,212 | 43,540 |



Beta Nursing Home
Contributory Asset Charge
Intangible Assets
(\$s)

| Contributory Intangible Assets | Value |
|-------------------------------------|-----------|
| Computer software | 500,000 |
| Trademarks and trade names | 500,000 |
| Proprietary technology (procedures) | 500,000 |
| Assembled workforce | 500,000 |
| Total | 2,000,000 |

| Contributory Intangible Asset Capital Charge | |
|--|-----------|
| Contributory intangible assets | 2,000,000 |
| Return on contributory assets | 10% |
| Contributory intangible asset capital charge | 200,000 |

| | |
|--|-----------|
| ÷ Total Beta Nursing Home revenue | 6,000,000 |
| = Contributory intangible asset capital charge as a % of Beta total revenue | 3% |

Beta Residential Client Relationships—Note Regarding Hospice Care Patient Relationships

- The analyst also valued the Beta hospice care client 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 hospice care client relationships to be \$800,000.

Beta Nursing Home Residential Client Relationships Illustrative Example - Conclusion

- The assessor valued the total Beta operating property at \$10,000,000.
- The analyst valued the residential client relationships at \$1,900,000, the hospice patient relationships at \$800,000, and the other identifiable intangible assets at \$2,000,000
- The taxpayer will extract the \$4,700,000 total 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 RE and TPP RCNLD and the \$5,300,000 residual from total Beta property assessment (i.e., \$500,000) is probably the Beta Nursing Home goodwill/going-concern value.



Intangible Asset Extraction Procedures

- There are two common procedures to extract intangible asset values from the total operating property values
 - Direct subtraction method
 - Transfer price (income allocation) method
- The direct subtraction method is easiest to understand:

Synthesized total value of taxpayer 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 separate entities:
 - One operating company entity operates the subject RE and TPP
 - One holding company entity holds the subject 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 Gamma General Hospital (“Gamma”) is assessed at \$100,000,000
 - 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 Gamma hospital
 - Intangible assets are exempt from property taxation in the subject jurisdiction
 - The analyst values the Gamma computer software on the next slide
 - To simplify the example, let's ignore all other exempt intangible assets

Gamma General Hospital Computer Software Value

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

| <u>Computer Software System</u> | <u>Estimated Software Development Development Effort—in Person Months</u> | <u>Elapsed Time to Develop Replacement Software—in Calendar Months</u> | <u>Full Absorption Cost per Person Month</u> | <u>Indicated RCNLD Method Component \$000</u> |
|---|---|--|--|---|
| AS/400 | 453 | 29 | \$14,585 | 6,610 |
| Hospital operations | 99 | 25 | 14,585 | 1,430 |
| Tandem | 330 | 16 | 14,585 | 4,820 |
| Unisys | 123 | 5 | 14,585 | 1,790 |
| Pioneer | <u>181</u> | 41 | 14,585 | <u>2,640</u> |
| Total direct and indirect costs component (rounded) | 1,186 | 24 | | 17,290 |
| Plus: Developer's profit, at 16% | | | | <u>2,770</u> |
| Subtotal | | | | 20,060 |
| Plus: Entrepreneurial incentive, based on 2 years lost income | | | | <u>3,120</u> |
| Equals: Total replacement cost new | | | | 23,180 |
| Less: Functional obsolescence, based on software replacement plans | | | | <u>3,690</u> |
| Equals: Subtotal | | | | 19,490 |
| Less: Economic obsolescence, at 19%, based on income shortfall analysis | | | | <u>3,700</u> |
| Equals: Computer software RCNLD | | | | <u>15,790</u> |
| Computer software value (rounded) | | | | <u>\$16,000</u> |



Gamma General Hospital Extraction of Intangible Asset Value—Direct Subtraction

- Direct subtraction analysis

\$100,000,000 synthesized value of Gamma hospital total operating assets

less: \$16,000,000 value of Gamma hospital computer software

equals: \$84,000,000 residual value of Gamma hospital RE and TPP
(assuming no other intangible assets)

Gamma General Hospital Extraction of Intangible Asset Value—Direct Subtraction

- Assessor valuation of Gamma hospital total assets

Income approach
value indication –
yield capitalization
method [a]
\$110,000,000

Income approach
value indication –
direct capitalization
method [b]
\$90,000,000

Sales comparison
approach value
indication – direct sales
comparison method [c]
\$96,000,000

Value of total assets

Valuation synthesis and conclusion –
assessor concludes reconciled value of
\$100,000,000 for Gamma total assets

Notes:

[a] Based on present value of Gamma hospital total net cash flow

[b] Based on direct capitalization of Gamma hospital total net operating income

[c] Based on comparable sales of other operating hospitals and market-derived income pricing multiples

Gamma General Hospital Extraction of Intangible Asset Value—Direct Subtraction (cont.)

minus

- Valuation of Gamma hospital intangible assets

– Value of intangible assets

Cost approach value indication –
RCNLD method
\$16,000,000

- Valuation of Gamma hospital assessable RE and TPP

equals

= Value of tangible assets

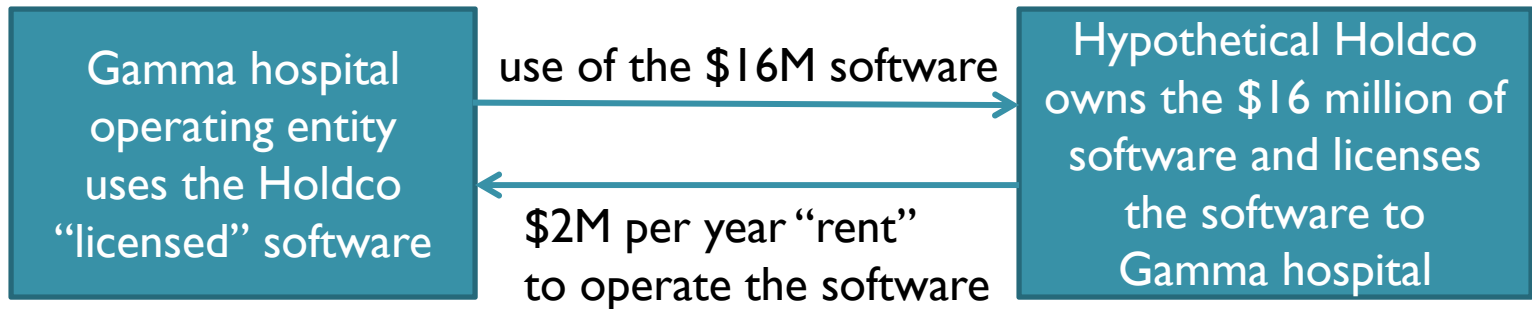
Valuation synthesis and conclusion –
residual value of \$84,000,000
for Gamma assessable assets

Gamma General Hospital Extraction of Intangible Asset Value – Income Allocation

- Transfer price (income allocation)
 1. $\$16,000,000$ value of Gamma computer software
 $\times 12.5\%$ fair rate of return on Gamma computer software

 $\underline{\$2,000,000}$ 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 $\$2,000,000$ transfer price (or economic rent) is subtracted from the Gamma hospital net operating income or net cash flow included in any income approach analysis or any sales comparison approach analysis
 4. The Gamma income is reduced by the “rent” of the software, so the Gamma value is reduced by the value of the software
 5. This transfer price is illustrated on the following slide

Gamma General Hospital Extraction of Intangible Asset Value – Income Allocation (cont.)



hypothetical Gamma operating hospital owns all of the taxable RE and TPP only

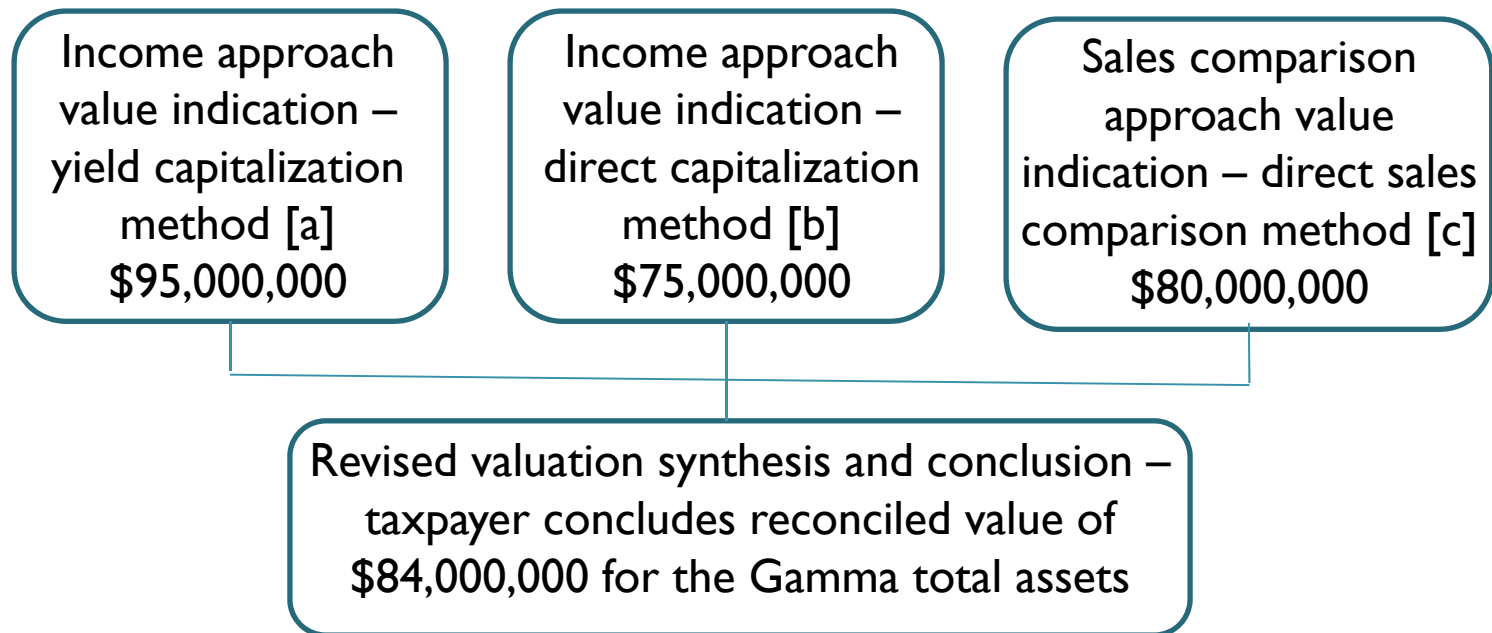
hypothetical intangible asset holding company owns (and licenses) all of the exempt intangible assets

Gamma General Hospital Extraction of Intangible Asset Value—Income Allocation

- Based on “rent” of software from the hypothetical intangible asset holding company, the Gamma hospital income (e.g., net cash flow, net operating income, EBIT, or EBITDA) is reduced by \$2,000,000 per year.
- The taxpayer applies the same Gamma total property valuation approaches and methods that the assessor used, but with lower (by \$2,000,000) income metrics.

Gamma General Hospital Extraction of Intangible Asset Value—Income Allocation

- Revised valuation of Gamma hospital total assets



Notes:

[a] Excludes net cash flow related to fair return on Gamma hospital software.

[b] Excludes net operating income related to fair return on Gamma hospital software.

[c] Excludes EBITDA related to fair return on Gamma hospital software.



Gamma General Hospital Extraction of Intangible Asset Value – Income Allocation (cont.)

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

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 total 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 hospitals, clinics, nursing homes, surgical centers, dialysis centers, 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 the taxpayer intangible assets in any economic obsolescence analysis

Summary and Conclusion

- What is—and what is not—and intangible asset
- Examples of health care industry intangible assets and intellectual property
- Common reasons to value health care intangible assets
- Intangible asset property taxation considerations
- Generally accepted intangible asset valuation approaches and methods
- Methods for intangible asset extraction from the total property value
- Intangible asset valuation illustrative examples
- Intangible asset extraction illustrative examples
- Questions and discussion