Valuation of Licenses and Permits

Robert F. Reilly, CPA

Valuation analysts are often called on to perform valuations of the licenses and permits category of intangible assets for various gift, estate, and generation-skipping tax purposes. This discussion describes the different types of licenses and permits, summarizes the applicable generally accepted intangible asset valuation approaches and methods, and reviews the factors that valuation analysts generally consider in the intangible asset valuation. In addition, this discussion presents a simple illustrative example of a license and permit valuation analysis.

INTRODUCTION

Valuation analysts (“analysts”) are often called on to estimate the value of many different categories of intangible assets. These intangible asset valuation analyses may be performed for various gift tax, estate tax, and generation-skipping tax purposes.

These taxation-related valuations can be performed for planning, compliance, and controversy purposes. This discussion focuses on valuations related to the licenses and permits category of intangible assets.

All the generally accepted intangible asset valuation approaches (i.e., the market, income, and cost approaches) may be applicable to the valuation of this intangible asset category. This discussion presents illustrative examples of the application of the income approach and the cost approach to the valuation of two common types of licenses and permits.

As part of the intangible asset valuation process, the analyst performs a review of the terms of the license or permit. In addition, the analyst performs an assessment of the existing industry and market conditions with respect to the subject license or permit.

Such due diligence procedures allow the analyst to determine the economic benefits, if any, provided by the license or permit. To the extent that the aforementioned due diligence results in the conclusion that the license or permit conveys an immaterial economic benefit to the owner/operator, then that intangible asset may have little or no value.

This discussion presents examples both of business licenses and permits and of private and intellectual property licenses. In addition, this discussion summarizes many of the factors that the analyst considers when preparing a license or permit valuation.

LICENSES AND PERMITS

For purposes of this discussion, a license may be defined as governmental permission to perform a particular act or to conduct a particular business or occupation. A license may also be defined as a private grant of the right to use an intellectual property, such as a patent or musical composition copyright.

Similarly, a permit may be defined as a license or other document given by an authorized public official or agency to allow a person or business to perform certain acts.

Business licenses and permits are used by governmental bodies to protect the public by ensuring that the business owner/operator or the professional practitioner complies with applicable laws and regulations.

Professional licenses, such as those granted to doctors, lawyers, accountants, and so on, are typically included in the business license category of intangible assets. Intellectual property license
agreements (private licenses) are used to allow third-party licensees to exploit the intellectual property of the developer or licensor.

Depending on the nature of the business and the regulatory environment in which it operates, the ownership of a license or permit may convey significant value to the owner/operator. Licenses and permits typically fall into a category of intangible assets sometimes referred to as “contract intangible assets.”

This intangible asset category provides value to the owner/operator as a result of a written, legally enforceable contractual arrangement. In the case of a license or permit, the contractual arrangement is made with a governing authority, and it gives the owner/operator the right to conduct all or part of the subject business.

A contract intangible asset can result from any number of the agreements that are consummated daily between businesses and individuals. Most contract intangible assets can be categorized based on the source of the economic benefit giving rise to the existence of the intangible asset.

Contract intangible assets relating to (1) the receipt of goods or services at an economically advantageous rate or (2) the granting of exclusive or protective rights to an entity are generally classified as receiver based.

Contract intangible assets relating to (1) the provision of goods and services at favorable rates (relative to the underlying cost of the goods or services provided) or (2) the securing of future benefit streams or provider rights for an entity are generally classified as provider based.

A business license or permit may grant exclusive or protective rights to an entity. That license or permit can be categorized as receiver based. The license or permit may secure future benefit streams or provider rights for an entity. It can be categorized as provider based.

For example, an owner/operator may secure a license or permit to protect its right to receive or import certain products. This license is an example of a receiver-based contract. An owner/operator may secure a license to sell regulated products such as pharmaceuticals. This license would be an example of a provider-based contract.

In both cases, the license or permit grants the owner/operator the ability to generate an economic benefit from the business activity.

In most cases, this economic benefit has value to the owner/operator, and it may also have value to a third party seeking to purchase the license or permit intangible asset.

Licenses and permits are typically categorized as contract intangible assets. This is because they grant protective rights to an individual or entity owner/grantor. Such licenses and permits allow the individual or entity owner/grantor the legal right to conduct business in a legally regulated setting. By virtue of the fact that any owner/operator satisfies the legal requirements to obtain a business license or permit before conducting all or part of the subject business, these rights have value to the holder. Often, these rights may be conveyed to a third party.

**Examples of the Licenses and Permits Intangible Asset**

Business licenses and permits provide authorization for an owner/operator to operate all or a portion of the business in a regulated environment. The relevant regulation may be promulgated by either governmental agencies or professional organizations. The purpose of such regulatory authorities is to police businesses or individuals that operate in the profession.

The following list presents examples of common business licenses and permits:

- License to sell regulated goods, such as pharmaceuticals
- License to operate in regulated industries, such as health care, food service, or sale of firearms
- License to practice in a regulated profession, such as medicine, law, or accountancy
- License to sell alcoholic beverages
- Logging permit
- Salvage permit
- Construction permit
- Environmental permit

Environmental permits are an important requirement for businesses operating in many industries. For example, a business entity may operate a facility or equipment that may emit pollutants into the atmosphere from a stationary source. In most jurisdictions, such a business entity must obtain a permit before operating that facility or equipment.

The term license may also be applied to a private grant of the right to use some intellectual property, such as a patent, trademark, or musical composition copyright.

Trademark licenses, patent licenses, and copyright licenses are examples of common types of intellectual property licenses. Franchises, liquor
licenses, and hospital certificates of need are examples of licenses that permit the guardian of a certain type of business.

In addition, professionals and other service providers are generally required to obtain a license in order to provide their services. These licenses are typically not transferable. However, such licenses do have a value to the licensed practitioner. The amount of that license value is often an important issue in family law matters.

**Reasons to Value the Licenses and Permits Intangible Asset**

Typically, an individual or business would not acquire an existing license or permit unless it was economically advantageous to do so. A change in either general industry or economic conditions subsequent to the original acquisition of the license or permit may exert a positive or negative impact on the value of an existing license or permit.

Business licenses and permits may be valued for purposes of a sale or conveyance to a third party. In certain cases, licenses provided by governmental agencies are transferable to third parties, either on their own or as part of the sale of a business. Licenses and permits may also be valued for purposes of a business combination purchase price allocation.

For financial accounting purposes, a portion of the business acquisition purchase price may be allocated to the fair value of the license or permit. Licenses and permits are also valued within a litigation context. Such a valuation may be needed when the plaintiff in a lawsuit claims damages to the license or permit due to the wrongful actions of the defendant.

**Factors That Affect the Value of Licenses and Permits**

The factors that affect the value of a license or permit are similar to the factors that affect the value of other categories of intangible assets.

The following list presents some of the factors that analysts typically consider in the license or permit valuation:

- The number of licenses or permits available in the industry and the number of licenses or permits available to similarly situated applicants
- The cost to replicate or replace the license or permit
- The owner/operator’s history regarding the renewal or termination of prior licenses and permits
- The average service life of the license or permit
- The restrictions placed on the renewal of the license or permit
- The ability of the owner/operator to transfer the license or permit
- The cost of maintaining any standards required to hold the license or permit
- The general economic and the industry-specific conditions and outlook

Most licenses and permits may be valued by the application of any of the three generally accepted intangible asset valuation approaches. In the market approach, the analyst will consider comparable sales (the comparable uncontrolled transaction method), comparable licenses (the relief from royalty method), and comparable companies (the comparable profit margin method).
In the income approach, the analyst may consider either the yield capitalization method or the direct capitalization method. The analyst should consider the remaining useful life (RUL) of the subject licenses and permits in the application of either income approach method.

In selecting the type of income to use in the income approach analysis, the analyst may consider such income measures as excess earnings, incremental earnings, residual earnings, or a split of total business enterprise operating income.

In the cost approach, the analyst may consider the replacement cost new less depreciation method and the reproduction cost new less depreciation method.

The following examples illustrate the application of (1) the income approach and the multiperiod excess earnings method (a yield capitalization method) and (2) the cost approach and the replacement cost new less depreciation method.

**INCOME APPROACH VALUATION ILLUSTRATIVE EXAMPLE**

Let’s assume that Acquiror Corporation (“Acquiror”) purchased the going concern business operations of Target Corporation (“Target”) as of June 30, 2014. The transaction was structured as a cash for stock transaction.

For financial accounting purposes, the transaction is accounted for using the acquisition accounting method under the provisions of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) topic 805-20.

The analyst is retained by Acquiror management to estimate the fair value of the Target identifiable intangible assets acquired as part of the transaction. Target provides digital wireless telephone services.

One of the Target intangible assets is a Federal Communications Commission (FCC) license that allows Target to provide these wireless services. This example illustrates the fair value valuation of this FCC license and the expected license renewals.

The objective of this valuation is to estimate the fair value of the Target FCC license and expected license renewals (collectively, “the subject license”) as of the June 30, 2014, acquisition date. The purpose of the valuation is to assist Acquiror management with its financial accounting with regard to the Target acquisition.

The analyst performed a highest and best use (HABU) analysis. Based on the results of that analysis, the analyst will value the FCC license based on the valuation premise of value in continued use as part of a going concern business. The analyst concluded that this premise of value represents the FCC license HABU.

Under the subject license, Target provides personal communications services (PCS) in the state of Gamma. Target offers a complete portfolio of commercial PCS-based voice and data services. The Target PCS business offers customers a number of pricing and service plans.

Commercial networks for wireless communications in the United States are generally divided into two categories: cellular and PCS. These two categories are distinguished by the frequency used. The cellular category uses the 800 megahertz band range, and the PCS category uses the 1900 megahertz range. In addition, PCS systems are digital. Depending on the location, the cellular networks may be digital or analog.

PCS systems are maintained by a network of small transmitter-receiver antennas installed throughout a community. PCS systems use comparatively low-powered phones that operate at a higher frequency than cellular phones. As a result, PCS systems use smaller cells that allow a greater concentration of users.

The net result is that a PCS network may have as much as 20 times the capacity of a standard cellular service area. Increased capacity allows PCS to spread costs over a potentially larger subscriber base. PCS phones also weigh less and are less expensive to manufacture than traditional cellular phones.

Target operates in the PCS spectrum based on an FCC license. The FCC originally granted the license to Target in 1993. The license originally had a 10-year term. In 2003, the FCC renewed the license for a second 10-year term; in 2013, the FCC again renewed the license for a third 10-year term. As of the valuation date, there are eight and one-half years remaining on the term of the current FCC license.

The analyst decided to use the income approach and the multiperiod excess earnings method (MEEM) to value the FCC license and expected license renewals. If appropriate income and expense data are available, licenses may be valued using the income approach. Using the income approach, the license value is estimated by calculating the present value of the income generated by the owner/operator’s ability to conduct business granted by the license.

Target management provided the analyst with financial projections for the PCS system for the remaining term of the current FCC license.

As the first procedure in the valuation, the analyst determined the term of the FCC license and
the expected license renewals. Often, a licensee can apply for a renewal of the license only at the end of the license term. Many government-issued licenses are renewed without difficulty.

Alternatively, many privately issued licenses are not automatically renewed. Depending on the facts and circumstances of the particular license, it may or may not be reasonable for the analyst to assume that the license is granted into perpetuity.

In this example, based on the Target historical experience with regard to its FCC license renewals, the analyst assumed that the income expected to be generated by the subject license (and expected license renewals) will continue into perpetuity.

As the second procedure in the valuation, the analyst calculated the income from the business conducted under the subject license. As mentioned above, management provided financial projections for the PCS business for the eight and one-half year period remaining term of the current license. Let’s assume that the analyst selects excess earnings as the appropriate income measure.

The analyst measures excess earnings as follows:

\[
\begin{align*}
\text{Earnings before interest and taxes} & \quad \text{Less: Income tax expense} \\
\text{Plus: Depreciation and amortization expense} & \quad \text{Less: Capital expenditures} \\
\text{Less: Increases in net working capital} & \quad \text{Less: Capital charge on contributory assets} \\
\text{Equals: Excess earnings related to the FCC license}
\end{align*}
\]

In this second procedure, the analyst estimates the excess earnings during a discrete projection period. Next, the analyst calculates the residual value associated with the expected FCC license renewals. This residual value relates to the expected excess earnings after the discrete projection period term.

In the MEEM, the contributory asset charge represents a required return on the tangible assets and other intangible assets that support the Target operations that use the FCC license. The analyst applies a contributory asset charge in order to quantify that portion of the total Target income that is contributed by the subject license.

In this example, the analyst calculates the contributory asset charge as an economic rent. The economic rent is a fair return on the Target contributory assets, expressed as a percent of revenue.

The analyst subtracts the contributory asset charge from the projected net income to isolate the amount of excess earnings generated by the FCC license. The contributory asset charge represents the fair return on all of the contributory assets. The contributory assets are the incremental tangible assets and intangible assets that are used in the production of revenue associated with the FCC license.

In this illustrative MEEM example, the contributory asset charge is calculated by multiplying an appropriate rate of return by the fair value of the tangible assets and other identifiable intangible assets.

In this MEEM example, the contributory assets include net working capital, tangible personal property, and an assembled workforce. In this particular analysis, the analyst assigns a lower fair rate of return on the net working capital and tangible personal property. The analyst assigns a higher fair rate of return on the assembled workforce intangible asset.

In the third procedure, the analyst calculates the discounted excess earnings for a discrete projection period. Exhibit 1 lists the valuation variables that the analyst used in this FCC license valuation.

Exhibit 2 presents the analyst’s MEEM analysis during the eight and a half year discrete projection period. Exhibit 3 presents the analyst’s MEEM analysis for the residual value period. Exhibit 4 presents the analyst’s valuation synthesis and conclusion related to the FCC license and the expected license renewals.

As presented in Exhibit 4, the fair value of the Target FCC license (and expected license renewals), based on the income approach and the MEEM, is $200,000,000 (rounded).

**Cost Approach Valuation Illustrative Example**

Permits such as environmental permits or construction permits often are important intangible assets to the owner/operator. Without certain permits, the owner/operator may not be able to operate the business. Permits such as environmental permits are sometimes valued using the cost approach.

In this second example, Taxpayer Corporation (“Taxpayer”) owns and operates an electric and steam cogeneration plant in the state of Epsilon. The cogeneration plant has the operating capacity to produce approximately 5 million pounds of steam per hour and approximately 800 megawatts of electricity per hour.

Taxpayer has a long-term provider contract to fulfill all of the steam and electricity requirements of the Customer Oil Company (“Customer”) refinery. The Customer refinery is located next to the Taxpayer cogeneration facility.
Taxpayer sells all of its excess electricity generation capacity (that is, the electricity generation in excess of the Customer requirements) into the local power grid. Taxpayer receives the market rate per megawatt hour for the electricity that it sells into the local power grid.

Taxpayer is subject to ad valorem property taxation in the state of Epsilon. Like all other industrial or commercial taxpayers, Taxpayer pays property taxes based on the fair market value of its real estate and tangible personal property.

However, the Epsilon assessor valued Taxpayer based on a unit (or business enterprise) valuation concept. That is, the assessor capitalized the Taxpayer net operating income to conclude the value of the total unit of the taxpayer assets. These assets are valued collectively as a going concern business.

The direct capitalization of net operating income concludes a value for all of the Taxpayer operating assets, including the intangible assets that are not subject to property taxation. In order to appeal its property tax assessment, Taxpayer has to identify and value its intangible assets.

Taxpayer owns and operates several categories of intangible assets. One of these categories is environmental permits. Management instructs the analyst to conclude the value of these environmental permits.

Management instructs the analyst to estimate the fair market value of the environmental permits, because fair market value is the statutory standard of value for property tax assessment purposes in the state of Epsilon. Management instructs the analyst to value the environmental permits as of January 1, 2014, because that is the statutory assessment date.

The objective of the valuation is to estimate the fair market value of the cogeneration facility environmental permits as of January 1, 2014. The purpose of the valuation is to assist management with its ad valorem property tax compliance.

### Exhibit 1
**Target Corporation**

**Illustrative List of Valuation Variables**

**FCC License Valuation**

**As of June 30, 2014**

<table>
<thead>
<tr>
<th>Item</th>
<th>Valuation Variable</th>
<th>Illustrative Valuation Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>present value discount rate</td>
<td>13%, based on the Target weighted average cost of capital</td>
</tr>
<tr>
<td>2</td>
<td>total projection period</td>
<td>perpetuity, based on the assumed perpetual renewal of the FCC license</td>
</tr>
<tr>
<td>3</td>
<td>discrete projection period</td>
<td>8 and one-half years, based on the remaining term of the current license and management’s financial plan</td>
</tr>
<tr>
<td>4</td>
<td>expected long-term growth rate</td>
<td>5%, based on management’s long-term projections</td>
</tr>
<tr>
<td>5</td>
<td>direct capitalization rate</td>
<td>the 8% direct capitalization rate is equal to the 13% discount rate minus the 5% expected long-term growth rate</td>
</tr>
<tr>
<td>6</td>
<td>effective income tax rate</td>
<td>39%, based on the Target historical effective income tax rate</td>
</tr>
<tr>
<td>7</td>
<td>net working capital</td>
<td>annual estimates based on management’s financial plan</td>
</tr>
<tr>
<td>8</td>
<td>depreciation and amortization expense</td>
<td>annual estimates based on management’s financial plan</td>
</tr>
<tr>
<td>9</td>
<td>capital expenditures</td>
<td>annual estimates based on management’s financial plan</td>
</tr>
<tr>
<td>10</td>
<td>residual value</td>
<td>based on the direct capitalization method and the simplifying assumption that capital expenditures will equal depreciation and amortization expense in perpetuity</td>
</tr>
</tbody>
</table>

**Exhibit 1**

Target Corporation

**Illustrative List of Valuation Variables**

**FCC License Valuation**

**As of June 30, 2014**
### Exhibit 2

**Target Corporation**  
**Fair Value of FCC License**  
**Income Approach—MEEM**  
**Discrete Projection Period Analysis**  
**As of June 30, 2014**  
**(in $000s)**

#### Excess Earnings Components

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Revenue</strong></td>
<td>6 Months Ended</td>
<td>26,429</td>
<td>63,838</td>
<td>81,780</td>
<td>103,781</td>
<td>120,734</td>
<td>136,910</td>
<td>153,613</td>
<td>170,309</td>
</tr>
<tr>
<td><strong>Pretax Income</strong></td>
<td>6 Months Ended</td>
<td>23,075</td>
<td>52,957</td>
<td>41,369</td>
<td>25,496</td>
<td>13,745</td>
<td>2,264</td>
<td>10,961</td>
<td>26,883</td>
</tr>
<tr>
<td><strong>add: Interest Expense</strong></td>
<td>6 Months Ended</td>
<td>13,709</td>
<td>35,941</td>
<td>36,548</td>
<td>37,819</td>
<td>38,896</td>
<td>38,041</td>
<td>36,221</td>
<td>32,887</td>
</tr>
<tr>
<td><strong>Earnings before Interest and Taxes (EBIT)</strong></td>
<td>6 Months Ended</td>
<td>9,366</td>
<td>(17,016)</td>
<td>(4,821)</td>
<td>12,323</td>
<td>25,151</td>
<td>35,777</td>
<td>47,182</td>
<td>59,770</td>
</tr>
<tr>
<td><strong>times: 1 – Effective Income Tax Rate</strong></td>
<td>6 Months Ended</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
<td>0.61</td>
</tr>
<tr>
<td><strong>Net Operating Income</strong></td>
<td>6 Months Ended</td>
<td>5,713</td>
<td>(10,380)</td>
<td>(2,941)</td>
<td>7,517</td>
<td>15,342</td>
<td>21,824</td>
<td>28,781</td>
<td>36,460</td>
</tr>
<tr>
<td><strong>add: Depreciation and Amortization Expense</strong></td>
<td>6 Months Ended</td>
<td>7,367</td>
<td>15,798</td>
<td>18,953</td>
<td>20,771</td>
<td>22,076</td>
<td>23,317</td>
<td>24,553</td>
<td>25,729</td>
</tr>
<tr>
<td><strong>less: Capital Expenditures</strong></td>
<td>6 Months Ended</td>
<td>13,713</td>
<td>27,495</td>
<td>11,788</td>
<td>10,197</td>
<td>10,444</td>
<td>9,891</td>
<td>9,412</td>
<td>9,512</td>
</tr>
<tr>
<td><strong>less: Increase in Net Working Capital</strong></td>
<td>6 Months Ended</td>
<td>7,648</td>
<td>(1,828)</td>
<td>(1,971)</td>
<td>(8,754)</td>
<td>(2,097)</td>
<td>(2,272)</td>
<td>(2,274)</td>
<td>(2,189)</td>
</tr>
<tr>
<td><strong>less: Contributory Asset Charge [a]</strong></td>
<td>6 Months Ended</td>
<td>(13,983)</td>
<td>(14,124)</td>
<td>(13,482)</td>
<td>(13,176)</td>
<td>(12,010)</td>
<td>(10,653)</td>
<td>(9,144)</td>
<td>(7,426)</td>
</tr>
<tr>
<td><strong>Excess Earnings</strong></td>
<td>6 Months Ended</td>
<td>(33,690)</td>
<td>(38,029)</td>
<td>(11,229)</td>
<td>(3,839)</td>
<td>12,867</td>
<td>22,294</td>
<td>32,052</td>
<td>43,162</td>
</tr>
<tr>
<td><strong>Excess Earnings, Adjusted [b]</strong></td>
<td>6 Months Ended</td>
<td>(22,460)</td>
<td>(38,029)</td>
<td>(11,229)</td>
<td>(3,839)</td>
<td>12,867</td>
<td>22,294</td>
<td>32,052</td>
<td>43,162</td>
</tr>
<tr>
<td><strong>Periods beyond Valuation Date</strong></td>
<td>6 Months Ended</td>
<td>0.17</td>
<td>0.83</td>
<td>1.83</td>
<td>2.83</td>
<td>3.83</td>
<td>4.83</td>
<td>5.83</td>
<td>6.83</td>
</tr>
<tr>
<td><strong>Discount Factor</strong></td>
<td>6 Months Ended</td>
<td>0.980</td>
<td>0.903</td>
<td>0.799</td>
<td>0.707</td>
<td>0.626</td>
<td>0.554</td>
<td>0.490</td>
<td>0.434</td>
</tr>
<tr>
<td><strong>Present Value of Excess Earnings</strong></td>
<td>6 Months Ended</td>
<td>(22,008)</td>
<td>(34,347)</td>
<td>(8,974)</td>
<td>(2,715)</td>
<td>8,054</td>
<td>12,349</td>
<td>15,699</td>
<td>18,724</td>
</tr>
</tbody>
</table>

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**Footnotes:**

[a] The contributory assets include net working capital, real estate, tangible personal property, and all other identifiable intangible assets (other than the FCC license).

[b] The capital charge is calculated as (1) a rate of return multiplied by (2) the fair value indication for each contributory asset.

[b] 2014 figure adjusted for partial period as of the valuation date.
Residual Value Analysis—Direct Capitalization Method

Residual Value = \( E_1 / (K - g) \)

\[
E_1 = 43,275 \quad \text{Normalized excess earnings in year 2023 \[a\]}
\]
\[
K = 13\% \quad \text{Present value discount rate}
\]
\[
g = 5\% \quad \text{Expected long-term growth rate}
\]

Indicated Residual Value 540,938

<table>
<thead>
<tr>
<th>Periods beyond the Valuation Date</th>
<th>Present Value Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.33</td>
<td>0.361</td>
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</table>

<table>
<thead>
<tr>
<th>Present Value of the Residual Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>195,278</td>
</tr>
</tbody>
</table>

Footnote:

[a] Normalization of year 2022 excess earnings projection:

2022 net operating income 43,242
add: depreciation and amortization expense --
less: capital expenditures --
less: increases in net working capital 2,028
equals: 2022 normalized excess earnings 41,214

Normalized 2023 excess earnings projection:

2022 normalized excess earnings 41,214
times: 1 + expected long-term growth rate 105%
equals: 2023 normalized excess earnings 43,275

Exhibit 4
Target Corporation
Fair Value of FCC License
Income Approach—MEEM
Fair Value Conclusion
As of June 30, 2014
(in $000s)

<table>
<thead>
<tr>
<th>Value Components</th>
<th>Value Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present value of discrete projection period excess earnings</td>
<td>6,931</td>
</tr>
<tr>
<td>Present value of residual value</td>
<td>195,278</td>
</tr>
<tr>
<td>Indicated fair value of FCC license and expected license renewals</td>
<td>202,209</td>
</tr>
</tbody>
</table>
The environmental permits were issued by the Epsilon department of environmental regulation. There are two permits related to the Taxpayer facility: a water permit and an air permit.

The cogeneration facility owner/operator must have both of these permits in order to operate the facility. These permits allow the permittee to emit up to a specified amount of pollutants into both the local water source and the atmosphere from the cogeneration facility operations.

Taxpayer has owned these permits since the facility started operating over 20 years ago. The original permits were granted for 10-year terms. The permits were renewed several times, each time for a 5-year renewal period. Taxpayer management recently renewed both permits.

Management expects that the permits will be renewed indefinitely as long as the company complies with all of the state’s environmental requirements. Taxpayer monitors its environmental pollutant output every hour and sends detailed compliance reports to the State of Epsilon every month. The company is subject to unannounced inspections by Epsilon environmental engineers.

The analyst decided to use the cost approach and the replacement cost new less depreciation (RCNLD) method to value the environmental permits. The analyst is aware that Taxpayer cannot operate the facility at all unless the permits are in place.

Management maintains detailed records with regard to the costs (both internal and external) related to applying for these environmental permits. The analyst is aware that the department of environmental regulation publishes data with respect to how long it takes for an applicant to obtain a new or renewal environmental permit.

Exhibits 5 through 7 summarize the cost approach valuation of the environmental permits.

Exhibit 5 provides a summary description of the subject environmental permits.

Exhibit 6 summarizes the estimates of the direct cost, indirect cost, and opportunity cost associated with replacing the environmental permits, as well as the analyst’s assessment of depreciation and obsolescence related to the environmental permits.

Exhibit 7 summarizes the analyst’s calculation of the entrepreneurial incentive cost component related to the environmental permits. In Exhibit 6, the analyst considered all direct and indirect costs related to the replacement of the permits.

As mentioned in Exhibit 6, the analyst concluded that the developer’s profit cost component was not necessary in this particular valuation. In this particular fact set, the analyst concluded that the environmental permits are not the type of intangible assets that would normally be developed by a third-party developer.

The analyst concluded that the opportunity cost related to the replacement permit application period is an appropriate measure of the entrepreneurial incentive. The Epsilon department of environmental regulation publishes statistics indicating that it takes about nine months for an applicant to receive the grant of water emissions or air emissions permit.

This nine-month application processing period is appropriate for an applicant that has a “clean” application (which is an application that indicates no environmental problems to the Epsilon examiners).

Management provided the analyst with the facility’s operating budget for 2014. The analyst used this 2014 operating budget to estimate the opportunity cost associated with not being able to operate the cogeneration plant during the nine month environmental permit replacement application period.

Exhibit 6 presents the fair market value conclusion with respect to the environmental permits. Based on the cost approach and RCNLD method

---

**Exhibit 5**

Taxpayer Corporation

Summary Description of the Environmental Permits

As of January 1, 2014

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Type of Permit</th>
<th>Company Registramt</th>
<th>Facility Name</th>
<th>Active Permit?</th>
<th>Permit Expiration Date</th>
<th>Term of Permit</th>
<th>Management Estimate of Direct and Indirect Costs for Permit Issuance</th>
</tr>
</thead>
<tbody>
<tr>
<td>12345</td>
<td>Water</td>
<td>Taxpayer Corporation</td>
<td>Cogeneration Facility</td>
<td>Yes</td>
<td>5/23/18</td>
<td>5 years</td>
<td>$150,000</td>
</tr>
<tr>
<td>54321</td>
<td>Air</td>
<td>Taxpayer Corporation</td>
<td>Cogeneration Facility</td>
<td>Yes</td>
<td>10/18/18</td>
<td>5 years</td>
<td>$150,000</td>
</tr>
</tbody>
</table>
# Exhibit 6
Taxpayer Corporation

## Fair Market Value of Environmental Permits

### Cost Approach - RCNLD Method

As of January 1, 2014

<table>
<thead>
<tr>
<th>Valuation Analysis</th>
<th>Direct and Indirect Costs</th>
<th>RCNLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Epsilon Environment Permit No. 12345 - Water</td>
<td>150,000 [a]</td>
<td>150,000</td>
</tr>
<tr>
<td>State of Epsilon Environment Permit No. 54321 - Air</td>
<td>150,000 [a]</td>
<td>150,000</td>
</tr>
<tr>
<td><strong>Total Direct and Indirect Costs</strong></td>
<td><strong>300,000</strong></td>
<td></td>
</tr>
<tr>
<td>plus: Entrepreneurial Incentive Opportunity Cost [b]</td>
<td></td>
<td><strong>19,000,000</strong></td>
</tr>
<tr>
<td>equals: Replacement Cost New (RCN) [c]</td>
<td></td>
<td><strong>19,300,000</strong></td>
</tr>
<tr>
<td>less: Depreciation and Obsolescence [d]</td>
<td></td>
<td>--</td>
</tr>
<tr>
<td>equals: Replacement Cost New Less Depreciation (RCNLD) [e]</td>
<td></td>
<td><strong>19,300,000</strong></td>
</tr>
<tr>
<td><strong>Indicated Fair Market Value of Environmental Permits (rounded)</strong></td>
<td></td>
<td><strong>19,300,000</strong></td>
</tr>
</tbody>
</table>

---

**Footnotes:**

[a] Based on the actual (recent) historical direct costs and indirect costs incurred by Taxpayer to obtain the actual permits. These costs include company management and engineering time, administrative time, law firm fees, environmental engineering study fees, water and air laboratory testing fees, and State of Epsilon permit application fees related to obtaining the environmental permits.

[b] Represents the opportunity cost or lost profit that Taxpayer would incur during the application period for the State of Epsilon to issue replacement environmental permits.

[c] Equals direct costs plus indirect costs plus entrepreneurial incentive opportunity cost. See footnote [e].

[d] Since the current permits were recently issued and since Taxpayer is in full compliance with all permit regulatory requirements, the analyst concluded that there is no obsolescence or depreciation allowance necessary with regard to these permits.

[e] In this analysis, the analyst concluded that these environmental permits are not the type of intangible assets that are normally purchased from an intangible asset developer. Therefore, in this particular analysis, the analyst decided not to add a replacement cost component related to developer's profit.
### Exhibit 7

**Taxpayer Corporation**

**Fair Market Value of Environmental Permits**

**Cost Approach - RCNL D Method**

**Opportunity Cost Analysis**

<table>
<thead>
<tr>
<th>Cost Component Valuation Analysis</th>
<th>Pro Forma Year Ending December 31, 2014 $000 [a]</th>
<th>Nine Months Ending September 30, 2014 $000 [b]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Revenue</strong></td>
<td>396,631</td>
<td>297,473</td>
</tr>
<tr>
<td><strong>Fuel and Consumables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Gas Units (mmBtu)</td>
<td>42,905</td>
<td>32,179</td>
</tr>
<tr>
<td>Natural Gas Price ($)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Cost of Natural Gas [c]</strong></td>
<td>278,882</td>
<td>209,162</td>
</tr>
<tr>
<td>Guel Gas Unit (mmBtu)</td>
<td>5,851</td>
<td>4,388</td>
</tr>
<tr>
<td>Natural Gas Price ($)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Fuel Gas</strong></td>
<td>38,029</td>
<td>28,522</td>
</tr>
<tr>
<td><strong>Total Fuel and Consumables [d]</strong></td>
<td>316,912</td>
<td>237,684</td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>79,720</td>
<td>59,790</td>
</tr>
<tr>
<td><strong>Depreciation and Amortization Expense</strong></td>
<td>9,673</td>
<td>7,255</td>
</tr>
<tr>
<td><strong>Operating Expenses</strong></td>
<td>35,766</td>
<td>26,824</td>
</tr>
<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>45,439</td>
<td>34,079</td>
</tr>
<tr>
<td><strong>Operating Income</strong></td>
<td>34,281</td>
<td>25,711</td>
</tr>
<tr>
<td><strong>Pretax Income</strong></td>
<td>34,281</td>
<td>25,711</td>
</tr>
<tr>
<td><strong>Income Taxes at 35%</strong></td>
<td>11,998</td>
<td>8,999</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>22,282</td>
<td>16,712</td>
</tr>
<tr>
<td><strong>Depreciation and Amortization Expense</strong></td>
<td>9,673</td>
<td>7,255</td>
</tr>
<tr>
<td><strong>Capital Expenditures</strong></td>
<td>(6,172)</td>
<td>(4,629)</td>
</tr>
<tr>
<td><strong>Net Cash Flow</strong></td>
<td>25,784</td>
<td>19,338</td>
</tr>
<tr>
<td><strong>Entrepreneurial Incentive Opportunity Cost During the Nine-Month Replacement Permit Application Period (rounded)</strong></td>
<td></td>
<td>19,000</td>
</tr>
</tbody>
</table>

**Footnotes:**

[a] Based on Taxpayer management budget for 2014.
[b] Based on the nine months estimated length of time necessary for Epsilon to issue replacement permits.
[c] Calculated as the natural gas units (mmBtu) multiplied by the natural gas price ($).
[d] Calculated as the fuel gas units (mmBtu) multiplied by the natural gas price ($).
analysis, the fair market value of the Taxpayer environmental permits is $19,300,000 (rounded).

**Valuation of Other Types of Licenses**

**Professional Licenses**

Professional licenses are often valued when the license is an asset at issue in a family law matter. A number of states include a professional license as a marital asset as long as the license was received during the term of the marriage. One explanation for this legal position is that the license (and its related earning power) is a marital asset that may be considered as part of the distribution of the marital property.

Some family law courts have considered that the nonworking spouse (or the nonlicensed spouse who works and supports the training and apprenticeship of the licensed spouse) creates an environment in which the licensed spouse can develop a career. These courts have concluded that the nonlicensed spouse may be entitled to a share of the value of the professional license marital asset.

On the other hand, other states have refused to consider a professional license as marital property. This statutory or judicial conclusion is due to (1) the difficulty inherent in valuing a professional license and (2) the inability of the licensed spouse to buy or sell the professional license.

Although these states do not include the value of the professional license in the marital estate, they often seek to compensate the nonlicensed spouse for the efforts in obtaining the license. In so doing, these family law courts may provide the nonlicensed spouse with either a greater portion of the marital assets or an additional monthly maintenance.

In such cases, some family law courts have held that, whatever separate value the license may have, the value of the license has merged with the value of the professional practice. These family law courts conclude that a separate equitable distribution award for the professional license is inappropriate. In such a situation, it is typically not necessary to analyze the nonlicensed spouse's investment in the career of the licensed spouse.

In some cases, family law courts have concluded that the nonlicensed spouse was not economically damaged, did not experience a lost economic opportunity, or was not actually harmed as a result of supporting the licensed spouse during the prelicense marriage period.

In some states in which this issue was litigated, the courts concluded that the nonlicensed spouse was not entitled to any compensation, even if he or she provided support for the licensed spouse. The courts reached this judicial decision because the nonlicensed spouse had not suffered any economic harm as a result of the licensed spouse's pursuit of the professional license or graduate degree.

Some family law courts have also considered the issue of the professional license holder who continues to work as a company employee, rather than entering into private practice. Different courts have concluded that the license maintains a separate value, one based on increased future earnings, and that the value of the license is an inseparable component of the employee's career.

Another issue addressed by family law courts is the value of professional goodwill. Some courts have concluded that professional goodwill should be treated differently from business goodwill. Typically, professional goodwill is based on the professional's reputation, and it is predicated on the professional continuing to practice.

Some family law courts consider professional goodwill to be related to future earnings capacity. Based on that judicial interpretation, professional goodwill is not a marital asset for marital distribution purposes. These courts have typically concluded, however, that the future earnings of the licensed spouse may be considered in awarding alimony to the nonlicensed spouse.
Professional Licenses Valuation
Method—Enhanced Future Earnings

One generally accepted professional license valuation method is to estimate the present value of the professional’s “enhanced future earnings” associated with the license. The professional’s enhanced earnings is typically defined as the amount of earnings expected to be generated by the professional by virtue of holding the license less the amount of earnings that would be generated by the same professional without the license.

The amount of nonlicense earnings is sometimes estimated by reference to statistical studies performed by the U.S. Census Bureau. Such U.S. Census Bureau studies are segregated by educational or professional status. The procedures related to this professional license valuation method are summarized in the following discussion.

First, the analyst is instructed as to whether the professional license is, in fact, marital property. This determination is a legal question. It should be answered by counsel based on state-specific statutory authority and judicial percent. Legal counsel should instruct the analyst as to whether the professional license is, or is not, a marital asset. Counsel makes this determination based on, among other things, whether the license was obtained before or after marriage and whether any appreciation in the license value occurred during the marriage.

If the license is determined to be marital property, the next procedure is to determine the percentage by which each spouse contributed to the license value. Legal counsel generally instructs the analyst to assume that each spouse contributed a certain percentage to the professional license value.

Once these determinations are made, second, the analyst estimates the present value of the enhanced earnings attributable to the license. To perform this procedure, the analyst estimates the professional’s baseline income.

This baseline income is the amount of annual income that the professional would expect to earn based on that individual’s educational or professional status at the inception of the marriage.

Then, the analyst compares this baseline income estimate to the licensed professional’s actual income. This actual income is the amount of annual income that the licensed professional is actually earning at the time of the divorce.

The difference between the baseline income and the actual income is the amount of enhanced earnings. The analyst subtracts income taxes from the enhanced earnings to determine the licensed professional’s net enhanced earnings.

Third, the analyst estimates the number of years that the licensed professional is expected to earn the net enhanced income. This procedure is performed by subtracting the licensed professional’s age at the time of divorce from the licensed professional’s estimated retirement age (usually age 65). For many different vocations, retirement statistics are available from the federal government.

These retirement statistics may indicate an expected retirement age for the professional that is not 65 years of age. That expected retirement age may depend on the professional’s vocation and current age.

In this procedure, the analyst considers the net enhanced earnings by year, the expected number of years until retirement, and the expected increase or decrease in the future enhanced earnings.

Fourth, the amount of net enhanced earnings is increased or decreased each year over the expected number of years until the professional retires. Whether this annual net enhanced earnings will increase or decrease each year depends on the professional’s vocation and current age.

Fifth, the analyst discounts the annual projection of net enhanced earnings back to the date of the divorce using an appropriate present value discount rate.

Finally, the analyst applies the nonlicensed spouse’s percentage contribution to the estimated present value of the professional’s enhanced earnings. This final calculation determines the nonlicensed spouse’s portion of the professional license value.

Summary
Analysts are often called on to value licenses or permits for various gift, estate, and generation-skipping tax purposes. These purposes may relate to transfer tax planning, compliance, or controversy. This discussion provided a definition of the licenses and permits intangible asset.

This discussion listed the factors that analysts typically consider during the license or permit valuation. This discussion presented an example of an income approach valuation of an FCC license and a cost approach valuation of power plant environmental permits.

Finally, this discussion described the valuation of professional licenses, focusing on the valuation of such licenses for family law purposes.

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