Fair Value Valuation of Identifiable Intangible Assets in the Acquisition Accounting of a Business Combination

Robert F. Reilly, CPA

Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") topic 805 provides U.S. generally accepted accounting principles ("GAAP") guidance with regard to the acquisition accounting for business combinations. One important consideration within the application of acquisition accounting is the fair value valuation of the acquired identifiable intangible assets. This discussion provides practical guidance with regard to the recognition of—and the fair value valuation of—identifiable intangible assets within the context of a business combination. This discussion provides illustrative examples of the fair value valuation of several identifiable intangible assets. And, this discussion provides valuation analyst caveats with regard to the development of, the work paper documentation of, and the valuation reporting for acquisition accounting fair value valuations.

**INTRODUCTION**

The Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") topic 805 provides U.S. generally accepted accounting principles ("GAAP") guidance related to business combinations. ASC 805 provides GAAP guidance related to the accounting for—and the reporting of—transactions that represent a business combination that should be recorded using the acquisition method of accounting.

The acquisition method of accounting is described in ASC 805-10-05-4. A business combination is defined in ASC 805-10-20 as “A transaction or other event in which an acquirer obtains control of one or more businesses. Transactions sometimes referred to as true mergers or mergers of equals are also business combinations.”

ASC 805 provides the requirements for how the acquirer in a business combination accomplishes the following financial reporting objectives:

1. Recognizing and measuring (a) the identifiable intangible assets acquired, (b) the liabilities assumed, and (c) any noncontrolling interest in the acquiree entity
2. Recognizing and measuring either (a) the goodwill acquired in the business combination or (b) any gain from a bargain purchase in the business combination
3. Determining what information to disclose to allow its financial statement users to evaluate the nature of—and the financial effect of—the business combination

The specific subtopics encompassed in ASC 805 include the following:

1. Overall (general acquisition accounting method guidance)
2. Identifiable assets and liabilities and any controlling interest
3. Goodwill or gain from a bargain purchase, including the consideration transferred
4. Reverse acquisitions
5. Related issues
6. Income taxes

Under ASC 805, the corporate acquirer accounts for a business combination under what is called the acquisition method of accounting. The experienced valuation analyst (“analyst”) may recall the now-obsolete GAAP term “purchase method” of accounting. Several years ago the FASB changed the previous terminology of “purchase method” (and the FASB also changed many of the technical accounting procedures) to the current terminology of “acquisition method.”

The reason for this terminology change was to emphasize that, under ASC 805, a business combination transaction can occur even when a merger or acquisition purchase transaction is not involved.

This discussion focuses on the fair value valuation of identifiable intangible assets related to a business combination for acquisition accounting purposes. That is, this discussion summarizes the analyst considerations with regard to performing, developing, documenting, and reporting the fair value valuation of acquired identifiable intangible assets.

This discussion concludes with recommended analyst caveats related to the development of—and the reporting of—fair value valuations of the identifiable intangible assets acquired in a business combination.

**Identifiable Intangible Assets**

Under ASC 805, an acquirer will recognize separately from goodwill the identifiable intangible assets acquired in a business combination. An intangible asset is considered to be identifiable if it meets either the separability criterion or the contractual-legal criterion of ASC 805-20-55.

For acquisition accounting purposes, an intangible asset is considered to be identifiable if it meets either of the following two ASC 805-20-55-2 criteria:

- The intangible asset is separable, that is, capable of being separated or divided from the entity that holds it and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract, identifiable asset, or liability, regardless of whether the acquirer intends to do so.
- The intangible asset arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the acquiree or from other rights and obligations of the acquiree.

These two criteria for identifiable intangible assets are called:

1. the separability criterion and
2. the legal/contractual criterion.

**Categories of Identifiable Intangible Assets**

ASC 805-20-55 provides a list of intangible assets that the FASB considers to have the characteristics to meet at least one of the two above-listed criteria to be an identifiable intangible asset.

The following list provides the ASC 805-20-55-13 categories of identifiable intangible assets:

- Marketing-related intangible assets
- Customer-related intangible assets
- Artistic intangible assets
- Contract-related intangible assets
- Technology-related intangible assets

According to ASC 805, goodwill is also an intangible asset. However, the FASB has determined that goodwill is not considered to be an identifiable intangible asset. Therefore, acquired goodwill is not valued. Rather, acquired goodwill is measured.

**Marketing-Related Intangible Assets**

ASC 805-20-55-14 through 19 provide the following examples of marketing-related intangible assets:

- Newspaper mastheads
- Trademarks, service marks, trade names, collective marks, and certification marks
- Trade dress
- Internet domain names
- Noncompetition agreements

**Customer-Related Intangible Assets**

ASC 805-20-55-20 through 28 provide the following examples of customer-related intangible assets:

- Customer lists
- Customer contracts and related customer relationships
- Noncontractual customer relationships
- Order or production backlogs

**Artistic-Related Intangible Assets**

ASC 805-20-55-29 provides the following examples of artistic-related intangible assets:
Plays, operas, ballets
- Books, magazines, newspaper, and other literary works
- Musical works such as composition, song lyrics, and advertising jingles
- Photographs, drawings, and clip art
- Audiovisual material including motion pictures, music videos, television programs

**Contract-Related Intangible Assets**
ASC 805-20-55-31 through 37 provide the following examples of contract-based intangible assets:
- License, royalty, standstill agreements
- Advertising contracts
- Lease agreements
- Construction permits
- Construction contracts
- Construction management, service, or supply contracts
- Broadcast rights
- Franchise rights
- Operating rights
- Use rights
- Servicing contracts
- Employment contracts

**Technology-Related Intangible Assets**
ASC 805-20-55-38 provides the following examples of technology-based intangible assets:
- Patented or copyright software
- Mask works
- Unpatented technology
- Databases
- Trade secrets

**Defining the Intangible Asset Valuation Assignment**
Documenting the analyst’s understanding of the assignment is an important procedure in the intangible asset fair value valuation. As indicated in the Mandatory Performance Framework (“MPF”), there are two components to the intangible asset fair value valuation assignment:
- The objective of the analysis
- The purpose of the analysis

Each of these two assignment components are summarized below.

**The Objective of the Valuation Analysis**
As indicated in the MPF, the objective of the analysis describes what the intangible asset valuation is intended to do. The objective of the valuation analysis describes the following:
- The specific intangible asset(s) that is (are) the subject of the valuation
- The ownership interest (or the bundle of legal rights) that is the subject of the valuation
- The standard of value and the premise of value being estimated
- The “as of” acquisition date or valuation date

ASC 820, Fair Value Measurements, provides a definition of fair value. ASC 820 also provides a conceptual framework—and practical guidance—for the measurement of fair value.

ASC 820-10-20 defines the fair value standard of value as follows:
The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date.

**The Purpose of the Valuation Analysis**
As indicated in the MPF, the purpose of the fair value valuation analysis describes the following:
- The audience for the intangible asset valuation (i.e., the party or parties who will rely on the valuation analysis and the value conclusion)
- The decision (if any) that will be influenced by the analysis results

The purpose of the valuation analysis also indicates the following:
- Why the intangible asset valuation is being performed
- The intended use(s) of the intangible asset valuation
Who is expected to (and permitted to) rely on the results of the intangible asset valuation?

**Bundles of Legal Rights**

In a business combination, the intangible asset ownership interest transferred is not always a fee simple interest. The acquiree may not own the total bundle of legal rights related to the transferred intangible asset, or the acquiree may not have transferred the entire bundle of legal rights to the acquirer. Therefore, the analyst should consider (and document in the assignment understanding) what bundle of legal rights is encompassed in the intangible asset fair value valuation.

Some of the alternative intangible asset legal rights that may be transferred (and, therefore, subject to valuation) include the following:

- Fee simple interest
- Life interest or estate
- Term interest or estate
- Licensor/franchisor interest
- Licensee/franchisee interest
- Sublicense interest
- Reversionary interest
- Development rights
- Exploitation rights
- Use rights
- Other contractual rights

**Data Gathering and Due Diligence**

Even though fair value contemplates a transfer between market participants, the analyst typically gathers and analyzes information related to the current intangible asset owner/operator.

Such information may typically include the following:

- The owner/operator historical and prospective financial statements
- The owner/operator historical and prospective intangible asset development/maintenance costs
- The owner/operator current and expected total production resource/capacity constraints

As one part of the fair value analysis, the analyst typically describes and quantifies the intangible asset economic benefits to the current owner/operator.

Examples of such economic benefits include the following:

- Associated revenue increase (e.g., related product unit price/volume, market size/position)
- Associated expense decrease (e.g., expense related to product returns; cost of goods sold; selling, general, and administrative; research and development)
- Associated investment decrease (e.g., inventory, capital expenditures)
- Associated risk decrease (existence of intangible asset licenses/contracts, decrease in the cost of capital components)

In the above list of factors, the word “associated” means the economic benefits that can be associated with—or attributed to—the subject intangible asset.

In addition, the analyst typically performs an assessment of the intangible asset impact on the owner/operator strategic position. That is, the analyst typically considers the impact of the intangible asset on the owner/operator’s SWOT (strengths, weaknesses, opportunities, and threats).

**Market Participant/Market Potential**

In addition to assessing the economic benefit to the current owner/operator, the analyst typically considers the intangible asset market potential outside of the current owner/operator—that is, to the market participant.

In this assessment of the intangible asset economic benefit to the market participant, the analyst typically considers the following factors:

- Change in the market definition or the market size for the intangible asset to an alternative (market participant) owner/user
- Change in the alternative/competitive uses of the intangible asset to an alternative (market participant) owner/user
- The subject intangible asset’s ability to create inbound or outbound license opportunities to an alternative (market participant) owner/user

The analyst typically considers whether the current owner (or a market participant) can both:
1. operate the identifiable intangible asset in the acquired entity and also
2. outbound license the identifiable intangible asset (for use in different products, different markets, different territories, etc.).

**ANALYST’S REVIEW OF FINANCIAL PROJECTIONS**

As indicated in the MPF, the analyst typically reviews and challenges (1) any owner/operator-prepared financial projections and (2) any owner/operator-prepared measures of intangible asset economic benefits.

These due diligence procedures typically apply to any financial projections prepared by either:
1. the acquiree company management or
2. the acquirer company management.

As part of the prospective financial information due diligence process, the analyst typically performs the following benchmark analyses:

- Compare any owner/operator-prepared prior financial projections to the owner/operator's prior actual results of operations
- Compare any owner/operator-prepared projections to the owner/operator's current capacity constraints
- Compare any owner/operator-prepared financial projections to the current total market size (for the market in which the intangible asset owner operates)
- Consider any published industry data related to average comparable profit margin (“CPM”) for other companies that participate in the intangible asset owner's industry
- Consider any published data related to the CPM of guideline publicly traded companies that participate in the intangible asset owner's industry
- Consider the quality and quantity of available intangible asset license data; these data could relate to the inbound or outbound license of the subject intangible asset or these data could relate to the arm’s-length use licenses of comparable uncontrolled transaction (“CUT”) intangible assets
- Perform a useful economic life (“UEL”) analysis, with consideration of the following factors:
  - Any legal/statutory life indications
  - Any contract/license life indications
  - Any technology obsolescence life issues
  - Any economic obsolescence life issues
  - The lives of any prior generations of the subject intangible asset
  - The current position of the subject intangible asset in its life cycle

ASC 805 pays particular attention to the estimation of the identifiable intangible asset UEL. This is because that UEL directly or indirectly affects the valuation of the intangible asset in each of the three generally accepted intangible asset valuation approaches (described below). In addition, the UEL affects the amortization period for intangible assets with a determinable UEL.

**INTANGIBLE ASSET VALUATION APPROACHES AND METHODS**

There are three generally accepted intangible asset valuation approaches: the cost approach, the market approach, and the income approach.

There are a number of generally accepted valuation methods within each intangible asset valuation approach. Each of the methods within an approach are based on common economic principles.

There are a number of valuation procedures that are used to apply each intangible asset valuation method. The valuation procedures are performed in order for the analyst to select and apply the individual valuation variables that are needed to complete the valuation method.

The various fair-value-related ASC topics often use the term “valuation techniques.” The term “techniques” is not often used in the valuation literature outside of the discipline of GAAP-related fair value valuations. However, analysts should understand that the ASC term “valuation techniques” is analogous to the more common term “valuation approaches.”

The following list of valuation approaches and methods uses the terminology and the categorization included in both ASC 820 and the MPF. Some of the valuation method titles and categories used for fair value accounting purposes may be slightly different than the titles that analysts would use for other valuation purposes.

For example, ASC 820 and the MPF categorize the greenfield method as an income approach valuation method. Most non-GAAP-related valuation literature would categorize the greenfield method as a cost approach valuation method. This is because the greenfield method quantifies the opportunity
cost to the intangible asset owner/operator to recreate an intangible asset if the owner/operator did not already own the subject intangible asset.

The greenfield method is often used for such contract-related intangible assets as licenses, permits, franchises, and certificates of need. The principal opportunity cost to the owner/operator is that entity’s lost income during the intangible asset recreation period.

However, these naming convention issues—such as whether the greenfield method is a cost approach method or an income approach method—are mainly semantic. These naming convention issues should not influence the value conclusion reached by the application of the particular intangible asset valuation method.

A detailed description of the generally accepted valuation approaches and methods is beyond the scope of this discussion. However, Exhibit 1 provides a list of the generally accepted intangible asset valuation approaches and methods.

The analyst should consider all generally accepted valuation approaches and methods in the fair value valuation of each identifiable intangible asset included in the business combination.

As recommended in the MPF, the analyst should document the thought process related to the selection of—and the rejection of—each valuation approach and method selected (or not selected). The analyst should document that selection (and rejection) criterion both (1) in the fair value valuation work papers and (2) in the fair value valuation report.

### Cost Approach Valuation Considerations

Some identifiable intangible assets lend themselves to cost approach valuation analyses. The following analyst considerations should be documented in both the fair value valuation work papers and the fair value valuation report.

All cost approach methods include both (1) a current cost measurement and (2) a depreciation measurement.

The analyst should explain and document his or her consideration of the following four cost components in the cost approach analysis:

- Direct costs (including direct materials and direct labor)
- Indirect costs (including development-related overhead and administrative expenses)
- Developer’s profit (on the sum of the direct costs and the indirect costs)
- Entrepreneurial incentive (that is, the opportunity cost—or the owner/operator’s lost income—during the intangible asset estimated replacement period)

The analyst should also explain and document his or her consideration of the following three depreciation components in the cost approach analysis:

- Physical depreciation (not a significant factor in most intangible asset valuations)
- Functional/technological obsolescence (where the analyst considers the intangible asset’s estimated UEL)
- Economic/external obsolescence (where the analyst considers the intangible asset owner/operator’s return on investment—or ROI—related to the intangible asset cost approach value indication)

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**Exhibit 1**

**Identifiable Intangible Assets**

**Generally Accepted Valuation Approaches and Methods**

<table>
<thead>
<tr>
<th>Cost Approach Methods</th>
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</thead>
<tbody>
<tr>
<td>- Reproduction cost new less depreciation (“RPCNLD”) method</td>
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<tr>
<td>- Replacement cost new less depreciation (“RCNLD”) method</td>
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<tr>
<td>- Trended original cost less depreciation (“TOCLD”) method</td>
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</tbody>
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<table>
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<tr>
<th>Market Approach Methods</th>
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<tbody>
<tr>
<td>- Relief from royalty (“RFR”) method</td>
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<tr>
<td>- Comparable uncontrolled transactions (“CUT”) method</td>
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<tr>
<td>- Comparable profit margin (“CPM”) method</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Income Approach Methods</th>
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<tbody>
<tr>
<td>- Differential income (with/without) method</td>
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<tr>
<td>- Incremental income method</td>
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<tr>
<td>- Greenfield method</td>
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<tr>
<td>- Profit split method (or residual profit split method)</td>
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<tr>
<td>- Disaggregated method</td>
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<tr>
<td>- Distributor method</td>
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<tr>
<td>- Residual (excess) income method</td>
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<tr>
<td>- Capitalized excess earnings method (“CEEM”)</td>
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<tr>
<td>- Multiperiod excess earnings method (“MEEM”)</td>
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</tbody>
</table>
In the acquisition accounting valuation, the analyst should explain and document his or her application of the following cost approach valuation formula:

\[
\text{Current cost measurement} - \text{Physical depreciation (if any)} - \text{Functional obsolescence} - \text{Technological obsolescence (if quantified separately from functional obsolescence)} - \text{Economic obsolescence (a component of external obsolescence)} = \text{Intangible asset fair value indication}
\]

In addition, the analyst should consider the following cost approach factors:

- All cost components (including the opportunity cost component) included in the current cost measurement
- The treatment of any excess capital (i.e., related to the intangible asset development) costs and any excess operating costs (related to the operation of the intangible asset)
- All considerations of (and estimation of) the intangible asset’s UEL
- All considerations of (and estimation of) economic obsolescence that may exist at the intangible asset owner/operator entity level

**Market Approach Valuation Considerations**

The analyst should be aware that market approach valuation pricing metrics are based on either comparable or guideline:

- licenses of intangible assets,
- sales of intangible assets, or
- companies that use intangible assets.

The fair value valuation should explain and document the analyst’s consideration of—and selection/rejection of—the following market approach valuation variables and valuation procedures:

- Any quantitative/qualitative analysis with regard to the ownership and operation of the intangible asset
- The guideline license/sale/company selection criteria
- The actual guideline license/sale/company selection (and rejection)

**Income Approach Valuation Considerations**

Some identifiable intangible assets lend themselves to income approach valuation analyses. The following analyst considerations should be documented in both the fair value valuation work papers and the fair value valuation report.

The analyst should be aware that, in the intangible asset income approach, the common income measurement concepts include the following:
Incremental (or differential) owner/operator revenue (selling price and/or units sold)
- Decremental owner/operator expense (operating or other)
- Decremental owner/operator investment (capital or other)
- Decremental risk to the owner/operator (resulting in a lower discount rate)
- A split of the owner/operator overall business enterprise income
- Any excess owner/operator overall business enterprise income

Some of the common income measures (related to the identifiable intangible asset) that may be used in the income approach analysis include the following:
- Earnings before interest, taxes, depreciation, and amortization (“EBITDA”)
- Earnings before interest and taxes (“EBIT”)
- Net operating income (“NOI”) (EBITDA less income taxes)
- Net income
- Net cash flow

The analyst should associate the above-mentioned income concepts and income measures to the identifiable intangible asset. That is, the income approach valuation should incorporate only the income associated with the ownership of—the operation of—the identifiable intangible asset. The fair value valuation report (and the valuation work papers) should explain how the analyst allocated, split, or otherwise associated the intangible-asset-related portion of the owner/operator income to the identifiable intangible asset subject to valuation.

The fair value valuation report (and the valuation work papers) should explain the analyst’s selection of the particular income approach valuation formula to use in the analysis. That is, the fair value valuation report should explain which of the following valuation methods and procedures were used (and why they were used):

1. Yield capitalization methods, based on a nonconstant expected growth rate in the intangible asset income projection
   a. with the income projected over a finite intangible asset UEL income projection period (without a terminal value) or
   b. with the income projected over a finite intangible asset UEL income projection period with a terminal value
2. Direct capitalization methods, based on a constant expected growth rate in the intangible asset income projection
   a. with the intangible-asset-related income capitalized over a finite UEL projection period or
   b. with the intangible-asset-related income capitalized over a perpetuity UEL projection period

For each of the above-mentioned income approach valuation methods, the estimation of the intangible asset UEL is an important part of the fair value valuation. The estimated UEL affects the income approach valuation analysis and value conclusion. And, the estimated UEL affects the amortization period for the identifiable intangible asset, after it is recorded in the acquisition accounting.

As will be further explained below, the analyst should explain two components of the UEL estimation.

The first component is the term of the UEL—for example, the number of years of remaining useful life in the income projection. The second component is the rate of income decay over the UEL. This factor relates to the slope of the intangible asset income decay curve.

That is, will the intangible asset income remain constant over the UEL? Will the intangible asset income decline over the UEL? Will that future income decrease occur at a constant rate of change—or at a nonconstant (accelerating) rate of change?

The analyst should decide and document the following income approach valuation considerations in the acquisition accounting analysis:
- How the analysis matched the selected discount/capitalization rate with the selected intangible asset income measure
- How the analysis matched the selected discount/capitalization rate with the subject intangible asset level of risk
- How the analyst considered the valuation date state of the competition in the owner/operator industry
- How the analysis considered all subsequent (to the valuation date) capital expenditures, R&D expenses, marketing expenditures, etc., related to the intangible asset ownership/operation
- How the fair value valuation analyzed only the amount of income that is directly related
to (or associated with) the subject intangible asset

- How the fair value valuation present valued the projected income either:
  - over the intangible asset average UEL or
  - down the intangible asset UEL income decay curve.

In both the fair value valuation report and fair value valuation work papers, the analyst should explain and document the decision process with regard to (1) the selection of the length of the intangible asset UEL period and (2) the selection of the shape of the intangible asset UEL decay curve.

**Income Approach Tax Amortization Benefit Adjustment**

The analyst’s decision to apply a tax amortization benefit (“TAB”) adjustment to the income approach analysis may have a material impact on the intangible asset fair value conclusion. Both ASC 820 and the MFP discuss the valuation considerations with respect to the TAB in an intangible asset income approach analysis. The analyst should ensure that the fair value valuation report (and the fair value valuation work papers) adequately discuss the analyst’s TAB considerations.

For federal income tax purposes in the U.S., taxpayers may amortize the cost of many purchased intangible assets over the Internal Revenue Code Section 197 15-year allowed amortization period. In the intangible asset income approach valuation method analysis:

1. the intangible asset value amortization expense is typically recognized as a noncash expense that occurs before the measurement of pretax income and
2. the amortization expense is typically added back to the income projection as a noncash expense after the projected income tax expense line in the income approach analysis.

Alternatively, this incremental effect on the income approach value indication may be recognized by the use of a so-called tax amortization benefit factor. The TAB factor is typically added as a value increment adjustment to the unadjusted income approach value indication.

This TAB factor is often measured using the following formula:

\[
TAB = \frac{1}{1 - \left(\frac{\text{income tax rate}}{\text{amortization period}}\right) \times PVAF}
\]

In the typical application of the TAB formula in the income approach valuation analysis:

- the income tax rate is the effective income tax rate that is otherwise used in the unadjusted income approach projection
- the amortization period is always the Section 197 statutory 15-year period
- the PVAF is the present value of an annuity factor for 15 years at the present value discount rate that is otherwise used in the unadjusted income approach valuation analysis

The following example provides a simple illustration of the application of the TAB adjustment in a typical intangible asset income approach analysis:

**Illustrative Example 1**

**Income Approach Valuation Analysis**

**Application of the TAB Adjustment**

**Illustrative Example Valuation Variables:**

- Intangible Asset Income Approach Unadjusted Value Indication – $100,000,000
- Owner/Operator Effective Income Tax Rate Used in the Unadjusted Analysis – 40%
- Selected Present Value Discount Rate – 20%

**TAB Factor Calculation:**

\[
TAB \text{ Factor} = \frac{1}{1 - \left(\frac{40\%}{15 \text{ years}}\right) \times PVAF}
\]

TAB Factor = 1.1424

This TAB factor results in an approximately 14 percent value adjustment—or value increment—to the unadjusted intangible asset income approach value indication.
Illustrative Example 1 (Continued)
Illustrative TAB Adjustment Factor
Application
Fair Value Conclusion

Application of TAB Factor to the Income Approach:

Unadjusted Income Approach Value Indication ×
TAB Adjustment Factor =
Intangible Asset Fair Value Indication

$100,000,000 Unadjusted Value × 1.1424 TAB =
$114,000,000 Fair Value (rounded)

The analyst should note that not all identifiable intangible assets qualify as Section 197 amortizable intangible assets. And, not all identifiable intangible assets are subject to the TAB adjustment in the income approach valuation analysis.

The analyst should also note that not all acquisition transactions are taxable (i.e., tax basis adjustment) acquisitions. However, under the acquisition accounting principles, the TAB adjustment may be applicable even if the amortizable tax basis of the transferred assets may not change in the hands of the new owner/market participant.

Also, the analyst should note that not all national taxing jurisdictions allow for the amortization of acquired intangible assets. That is, in international business combinations, there may be no equivalent to Section 197 in the local county income tax laws.

The analyst should consider (and document) all of the issues related to the TAB adjustment in the income approach valuation analyses.

Valuation Synthesis and Conclusion

The analyst should explain (and document) the acquisition accounting valuation synthesis and conclusion process. The synthesis and conclusion is the last procedure in the analyst’s process of reaching a fair value conclusion.

In the valuation synthesis and conclusion, the analyst typically performs a procedure that is often referred to as the valuation reconciliation. In this reconciliation, the analyst reviews all of the intangible asset valuation analyses and the various intangible asset value indications.

The analyst typically assigns either a quantitative or a qualitative weighting to each value indication. Based on the results of this valuation reconciliation, the analyst selects the final intangible asset value conclusion.

As part of this fair value valuation synthesis and conclusion process, the analyst typically asks—and answers—the following questions:

- Did I value the right thing? That is, did I analyze the correct intangible asset—and the correct ownership interest?
- Did I value the right thing the right way? That is, did I apply the appropriate valuation approaches, methods, and procedures in order to reach a fair value conclusion?
- Did I reach the right valuation conclusion? That is, did I correctly apply the valuation procedures that I performed in order to reach a reasonable and supportable fair value estimate?
- Did I do what I intended to do? That is, did I perform the assignment that I set out to perform? Did I achieve the stated purpose and objective of the fair value valuation assignment?

In particular, the MPF emphasizes the importance of the analyst’s documentation of these considerations in the fair value valuation work papers.

The previous discussions summarized many of the analyst’s considerations in the identifiable intangible asset valuation. The following discussions present illustrative examples of typical income approach, market approach, and cost approach intangible asset fair value valuations.

These fair value valuation analyses are presented for illustrative purposes only. They are not presented as a template for the application of these identifiable intangible asset valuation analyses.

Income Approach Illustrative Example

This illustrative example summarizes an income approach valuation analysis of an acquired customer relationships identifiable intangible asset. In this example, let’s assume that the Alpha Telecommunications Company (“Alpha”) stock was acquired by Acquiror Telecom Company. The valuation date is January 1, 2017.

The Alpha recurring customer relationships are an important intangible asset for the acquiree company.

The stock acquisition transaction will be accounted for as a business combination under the acquisition accounting provisions of ASC 805. Accordingly, fair value is the appropriate standard of value for this intangible asset valuation. Based on the analyst’s
highest and best use ("HABU") analysis, value in continued use is the appropriate premise of value for this intangible asset valuation.

Alpha serves both residential customers (about two-thirds of the Alpha revenue is generated by residential customers) and commercial customers (about one-third of the Alpha revenue is generated by commercial customers).

This illustrative example presents the valuation of the residential customer relationships. The valuation of the acquired commercial customer relationship would follow a similar methodology. Of course, the selected valuation variables will be different for the two categories of Alpha customer relationships.

Alpha retained an analyst to estimate the fair value of its customer relationship intangible asset as of the January 1, 2017, valuation date. The analyst decided to use the income approach and the multiperiod excess earnings method ("MEEM") to value this identifiable intangible asset. This decision regarding the selection of the valuation approach and the valuation method should be supported in the valuation report and in the valuation work papers.

To simplify this example, let’s assume that the analyst has already valued the Alpha contributory working capital assets, contributory tangible assets, and the following contributory intangible assets: computer software, proprietary technology, trademarks and trade names, and the trained and assembled workforce. Let’s assume that the analyst performed—and documented—a rigorous due diligence process. Based on that due diligence, the analyst selected the valuation variables listed in Exhibit 2.

Exhibit 3 summarizes the analyst’s income approach multiperiod excess earnings method valuation analysis of the Alpha customer relationships intangible asset.

Exhibit 4 presents the supporting detail for the analyst’s assessment of the Alpha residential customer relationships historical turnover (also called customer “churn”) rate.

Exhibit 5 presents the analyst’s assessment of the operating profit margin valuation variable. The analyst considered this historical profit margin related to the Alpha residential customers. Then, the analyst normalized this historical operating profit margin to remove the selling expenses specifically related to the solicitation of new residential customers.

Exhibit 6 summarizes the analyst’s projections of depreciation and amortization expense and of capital expenditures with regard to the Alpha residential customer-related revenue. These projections were based on the analyst’s assessment of the Alpha historical relationships on these financial fundamentals.

Exhibit 7 summarizes the analyst’s projections with regard to the working capital valuation variable. This exhibit summarizes the projection of the changes in the Alpha working capital balance during the expected UEL of the customer relationships. And, this exhibit summarizes the analysis of the contributory asset charge ROI related to the Alpha working capital balance investment.

Exhibit 8 summarizes the analyst’s projection of the appropriate contributory asset charge ROI with regard to the customer relationships-related tangible asset balance investment.

Exhibit 9 summarizes the analyst’s calculation of the appropriate contributory asset charge ROI with regard to the Alpha other (non-customer-relationship) intangible assets. The analyst had previously identified and valued the following contributory intangible assets: computer software, trademarks and trade names, proprietary technology, and a trained and assembled workforce.

In summary, the analyst used the multiperiod excess earnings method to estimate the fair value of the Alpha residential customer relationships intangible asset. The analyst projected the intangible-asset-related income over the expected UEL of the residential customer relationships.

The analyst present valued this excess income projection to conclude an unadjusted value indication. And, the analyst estimated and added the TAB adjustment in order to conclude the fair value of this identifiable intangible asset.

**Cost Approach Illustrative Example**

This illustrative example summarizes a cost approach valuation analysis of an acquired assembled workforce. The assembled workforce is a common contributory intangible asset considered in many fair value valuations. In this example, let’s assume that Bravo Electric Company ("Bravo") is an electric generation company that owns and operates an electric generating plant.

The Bravo stock was acquired by Acquiror Electric Company. The acquisition accounting valuation date was January 1, 2017.

The purchase transaction was accounted for as a business combination under the acquisition accounting provisions of ASC 805. Accordingly, the appropriate standard of value is fair value. Based on the analyst’s HABU analysis, the appropriate premise of value is value in continued use.

Even though the Bravo assembled workforce is not an identifiable intangible asset under ASC 805,
### Exhibit 2
**Alpha Telecommunications Company**  
Residential Customer Relationships Valuation  
Selected Valuation Variables  
As of January 1, 2017  
($000s)

<table>
<thead>
<tr>
<th>Valuation Analysis Projection Variables</th>
<th>Basis for the Analyst’s Valuation Variable Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Alpha 2017 budget revenue</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Budgeted residential customer revenue</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Budgeted commercial customer revenue</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Annual revenue growth rates</td>
<td>Alpha management long-range strategic plan</td>
</tr>
<tr>
<td>Customer attrition rate</td>
<td>Based on an average of the actual monthly attrition rates for the period 2013–2016</td>
</tr>
<tr>
<td>Economic useful life</td>
<td>Years until the remaining expected customer revenue is less than 5% of the original (valuation date) customer revenue</td>
</tr>
<tr>
<td>EBITDA profit margin %</td>
<td>Based on an average of 2012–2016, adjusted for new customer selling expense</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>15% of revenue, based on an average of 2012–2016</td>
</tr>
<tr>
<td>Amortization expense</td>
<td>5% of revenue, based on an average of 2012–2016</td>
</tr>
<tr>
<td>Income tax rate</td>
<td>Market-derived (market participant) effective income tax rate</td>
</tr>
<tr>
<td>Contributory asset charges:</td>
<td></td>
</tr>
<tr>
<td>Working capital charge</td>
<td>Working capital balance = 10% of revenue, based on the 2012–2015 actual average; capital charge % = the 10% Alpha weighted average cost of capital (“WACC”)</td>
</tr>
<tr>
<td>Tangible asset charge</td>
<td>Tangible asset fair value = $4,800,000, based on a replacement cost new less depreciation (“RCNLD”) method valuation analysis of the real estate (“RE”) and tangible personal property (“TPP”); $4,800,000 = 80% of total revenue; capital charge % = the 10% WACC</td>
</tr>
<tr>
<td>Intangible asset charge</td>
<td>Contributory intangible asset fair value = $2,000,000 based on the analyst’s fair value valuations of the Alpha software, trademarks, technology and assembled workforce; capital charge % = the 10% WACC; $200,000 capital charge = 3% of the Alpha total revenue</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>Annual capx = 105% of annual depreciation expense, based on the analyst’s due diligence of Alpha management projections; this variable is consistent with the Alpha historical 10-year average relationship</td>
</tr>
<tr>
<td>Working capital change</td>
<td>Based on the projected annual change in working capital balance; the balance is based on 10% of the remaining customer revenue</td>
</tr>
<tr>
<td>Discount periods</td>
<td>The midyear discounting convention is assumed</td>
</tr>
<tr>
<td>Discount rate</td>
<td>Based on the 10% WACC; the WACC equals the valuation conclusion’s weighted average return on assets—or WARA (and the acquisition price internal rate of return (“IRR”), so the analyst used 10% as the capital charge return on investment (“ROI”)</td>
</tr>
<tr>
<td>Tax amortization benefit factor</td>
<td>Based on 15-year period, 40% income tax rate, and 7.6061 PVAF factor for 15 years at a 10% present value discount rate</td>
</tr>
</tbody>
</table>
### Exhibit 3
**Alpha Telecommunications Company**  
**Residential Customer Relationships Intangible Asset**  
**Fair Value Valuation Summary**  
**As of January 1, 2017**  
**($000s)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Residential Customer Revenue</th>
<th>Residential Revenue Growth Rate</th>
<th>Customer Annual Attrition Rate</th>
<th>Remaining Customer Revenue %</th>
<th>Remaining Customer Revenue</th>
<th>EBITDA Margin %</th>
<th>EBITDA</th>
<th>Depreciation/Amortization Expense (% of revenue)</th>
<th>Adj EBIT</th>
<th>Income Taxes @ 40%</th>
<th>After-Tax Operating Income</th>
<th>Less: Contributory Asset Charges</th>
<th>Total Capital Charge</th>
<th>+ Depreciation/Amortization Expense</th>
<th>+ Working Capital Decrease</th>
<th>= Net Cash Flow from Remaining Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4,000,000</td>
<td>4%</td>
<td>24%</td>
<td>76.0%</td>
<td>3,040,000</td>
<td>60%</td>
<td>1,824,000</td>
<td>20%</td>
<td>1,216,000</td>
<td>486,400</td>
<td>729,600</td>
<td>30,400</td>
<td>364,800</td>
<td>478,800</td>
<td>(96,000)</td>
<td>590,000</td>
</tr>
<tr>
<td>2</td>
<td>4,160,000</td>
<td>4%</td>
<td>24%</td>
<td>57.8%</td>
<td>2,404,482</td>
<td>60%</td>
<td>1,442,688</td>
<td>20%</td>
<td>1,216,000</td>
<td>384,717</td>
<td>577,075</td>
<td>24,045</td>
<td>288,537</td>
<td>480,896</td>
<td>(63,552)</td>
<td>454,280</td>
</tr>
<tr>
<td>3</td>
<td>4,326,400</td>
<td>4%</td>
<td>24%</td>
<td>43.9%</td>
<td>1,502,818</td>
<td>60%</td>
<td>1,139,574</td>
<td>20%</td>
<td>1,216,000</td>
<td>303,866</td>
<td>556,805</td>
<td>151,943</td>
<td>227,915</td>
<td>399,858</td>
<td>(50,519)</td>
<td>359,153</td>
</tr>
<tr>
<td>4</td>
<td>4,499,456</td>
<td>4%</td>
<td>24%</td>
<td>33.4%</td>
<td>1,188,576</td>
<td>60%</td>
<td>885,202</td>
<td>20%</td>
<td>1,216,000</td>
<td>240,451</td>
<td>455,830</td>
<td>120,225</td>
<td>182,139</td>
<td>309,858</td>
<td>(39,647)</td>
<td>283,855</td>
</tr>
<tr>
<td>5</td>
<td>4,679,434</td>
<td>4%</td>
<td>24%</td>
<td>25.5%</td>
<td>939,256</td>
<td>60%</td>
<td>625,384</td>
<td>20%</td>
<td>1,216,000</td>
<td>190,172</td>
<td>285,259</td>
<td>90,056</td>
<td>147,317</td>
<td>237,715</td>
<td>(31,425)</td>
<td>224,570</td>
</tr>
<tr>
<td>6</td>
<td>4,866,612</td>
<td>4%</td>
<td>24%</td>
<td>19.3%</td>
<td>736,854</td>
<td>60%</td>
<td>442,112</td>
<td>20%</td>
<td>1,216,000</td>
<td>117,896</td>
<td>225,422</td>
<td>75,141</td>
<td>117,024</td>
<td>187,851</td>
<td>(25,280)</td>
<td>177,560</td>
</tr>
<tr>
<td>7</td>
<td>5,012,610</td>
<td>4%</td>
<td>24%</td>
<td>14.7%</td>
<td>573,092</td>
<td>60%</td>
<td>343,855</td>
<td>20%</td>
<td>1,216,000</td>
<td>91,695</td>
<td>176,845</td>
<td>58,948</td>
<td>101,957</td>
<td>147,932</td>
<td>(12,107)</td>
<td>139,980</td>
</tr>
<tr>
<td>8</td>
<td>5,162,988</td>
<td>4%</td>
<td>24%</td>
<td>11.1%</td>
<td>452,020</td>
<td>60%</td>
<td>271,212</td>
<td>20%</td>
<td>1,216,000</td>
<td>72,323</td>
<td>137,542</td>
<td>45,085</td>
<td>91,555</td>
<td>114,618</td>
<td>(7,412)</td>
<td>109,503</td>
</tr>
<tr>
<td>9</td>
<td>5,317,878</td>
<td>4%</td>
<td>24%</td>
<td>8.5%</td>
<td>350,555</td>
<td>60%</td>
<td>210,333</td>
<td>20%</td>
<td>1,216,000</td>
<td>56,089</td>
<td>108,485</td>
<td>30,564</td>
<td>62,922</td>
<td>88,403</td>
<td>(10,146)</td>
<td>85,560</td>
</tr>
<tr>
<td>10</td>
<td>5,477,414</td>
<td>4%</td>
<td>24%</td>
<td>6.4%</td>
<td>276,445</td>
<td>60%</td>
<td>165,867</td>
<td>20%</td>
<td>1,216,000</td>
<td>44,231</td>
<td>84,133</td>
<td>22,116</td>
<td>52,021</td>
<td>72,323</td>
<td>(8,293)</td>
<td>67,111</td>
</tr>
<tr>
<td>11</td>
<td>5,641,737</td>
<td>4%</td>
<td>24%</td>
<td>4.9%</td>
<td></td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **EBITDA Margin %**
- **Depreciation/Amortization Expense (% of revenue)**
- **Income Taxes @ 40%**
- **After-Tax Operating Income**
- **Less: Contributory Asset Charges**
  - Working Capital Asset Charge
  - Tangible Asset Capital Charge
  - Intangible Asset Capital Charge
- **Total Capital Charge**
- **Depreciation/Amortization Expense**
- **Working Capital Decrease**
- **Net Cash Flow from Remaining Customers**
- **Discount Period**
- **Present Value Factor @ 10%**
- **Present Value of Remaining Customer Cash Flow**
- **Tax Amortization Benefit Factor**
- **Fair Value of the Remaining Customer Relationships (rounded)**
<table>
<thead>
<tr>
<th>Month</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>2.46%</td>
<td>2.08%</td>
<td>2.00%</td>
<td>2.10%</td>
</tr>
<tr>
<td>February</td>
<td>1.76%</td>
<td>1.93%</td>
<td>2.02%</td>
<td>1.94%</td>
</tr>
<tr>
<td>March</td>
<td>2.05%</td>
<td>2.04%</td>
<td>2.05%</td>
<td>2.08%</td>
</tr>
<tr>
<td>April</td>
<td>1.91%</td>
<td>2.01%</td>
<td>2.01%</td>
<td>2.08%</td>
</tr>
<tr>
<td>May</td>
<td>2.06%</td>
<td>1.98%</td>
<td>2.01%</td>
<td>1.95%</td>
</tr>
<tr>
<td>June</td>
<td>1.95%</td>
<td>1.99%</td>
<td>2.09%</td>
<td>2.00%</td>
</tr>
<tr>
<td>July</td>
<td>1.92%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>1.78%</td>
</tr>
<tr>
<td>August</td>
<td>2.26%</td>
<td>2.05%</td>
<td>2.03%</td>
<td>2.00%</td>
</tr>
<tr>
<td>September</td>
<td>1.96%</td>
<td>2.02%</td>
<td>2.09%</td>
<td>2.11%</td>
</tr>
<tr>
<td>October</td>
<td>2.20%</td>
<td>2.10%</td>
<td>2.01%</td>
<td>2.03%</td>
</tr>
<tr>
<td>November</td>
<td>1.87%</td>
<td>2.00%</td>
<td>1.93%</td>
<td>1.86%</td>
</tr>
<tr>
<td>December</td>
<td>1.56%</td>
<td>2.01%</td>
<td>1.90%</td>
<td>1.85%</td>
</tr>
<tr>
<td>Residential Customer Annual Turnover Rate</td>
<td>24.0%</td>
<td>24.2%</td>
<td>24.2%</td>
<td>23.8%</td>
</tr>
</tbody>
</table>

### Exhibit 4
**Alpha Telecommunications Company**
**Residential Customer Relationships Valuation**
**Residential Customer Turnover Rate Analysis**

The historical new customer-related selling expense includes (1) any advertising directed solely to new customers and (2) any new customer promotional expense.
### Exhibit 6
**Alpha Telecommunications Company**
**Projection of the Relationship of Depreciation/Amortization Expense and Capital Expenditures ($000s)**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
<th>Year 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remaining Residential Customer Revenue</td>
<td>3,040,000</td>
<td>2,404,482</td>
<td>1,899,290</td>
<td>1,502,818</td>
<td>1,188,576</td>
<td>939,256</td>
<td>736,854</td>
<td>573,092</td>
<td>452,020</td>
<td>350,555</td>
<td>276,445</td>
</tr>
<tr>
<td>Depreciation Expense (% of revenue)</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Depreciation Expense</td>
<td>456,000</td>
<td>360,672</td>
<td>284,894</td>
<td>225,423</td>
<td>178,286</td>
<td>140,888</td>
<td>110,528</td>
<td>85,964</td>
<td>67,803</td>
<td>52,593</td>
<td>41,467</td>
</tr>
<tr>
<td>Capital Expenditures as % of Depreciation Expense</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
<td>105%</td>
</tr>
<tr>
<td>Capital Expenditures</td>
<td>478,800</td>
<td>378,706</td>
<td>299,139</td>
<td>236,694</td>
<td>187,200</td>
<td>147,932</td>
<td>116,054</td>
<td>90,262</td>
<td>71,193</td>
<td>55,212</td>
<td>43,540</td>
</tr>
<tr>
<td>Amortization Expense (% of revenue)</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Amortization Expense</td>
<td>152,000</td>
<td>120,224</td>
<td>94,965</td>
<td>75,141</td>
<td>59,429</td>
<td>46,963</td>
<td>36,843</td>
<td>28,655</td>
<td>22,601</td>
<td>17,528</td>
<td>13,822</td>
</tr>
<tr>
<td>Depreciation &amp; Amortization Expense</td>
<td>608,000</td>
<td>480,896</td>
<td>379,859</td>
<td>300,564</td>
<td>237,715</td>
<td>187,851</td>
<td>147,371</td>
<td>114,619</td>
<td>90,404</td>
<td>70,111</td>
<td>55,289</td>
</tr>
</tbody>
</table>
### Exhibit 7
**Alpha Telecommunications Company**
**Working Capital**
**Contributory Asset Charge**
($000s)

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
<th>Year 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remaining Residential Customer Revenue</td>
<td>3,040,000</td>
<td>2,404,480</td>
<td>1,899,290</td>
<td>1,502,818</td>
<td>1,188,576</td>
<td>939,256</td>
<td>736,854</td>
<td>573,092</td>
<td>452,020</td>
<td>350,555</td>
<td>276,445</td>
</tr>
<tr>
<td>Working Capital as a % of Revenue</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Working Capital Balance</td>
<td>304,000</td>
<td>240,448</td>
<td>189,929</td>
<td>150,282</td>
<td>118,857</td>
<td>93,926</td>
<td>73,685</td>
<td>57,309</td>
<td>45,202</td>
<td>35,056</td>
<td>27,644</td>
</tr>
<tr>
<td>Capital Charge ROI %</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Capital Charge on Working Capital Balance</td>
<td>30,400</td>
<td>24,045</td>
<td>18,993</td>
<td>15,028</td>
<td>11,886</td>
<td>9,393</td>
<td>7,369</td>
<td>5,731</td>
<td>4,520</td>
<td>3,506</td>
<td>2,764</td>
</tr>
<tr>
<td>Change in the Annual Working Capital Balance</td>
<td>(96,000)</td>
<td>(63,552)</td>
<td>(50,519)</td>
<td>(39,647)</td>
<td>(31,425)</td>
<td>(24,931)</td>
<td>(20,241)</td>
<td>(16,376)</td>
<td>(12,107)</td>
<td>(10,146)</td>
<td>(7,412)</td>
</tr>
</tbody>
</table>

### Exhibit 8
**Alpha Telecommunications Company**
**Tangible Assets**
**Contributory Asset Charge**
($000s)

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
<th>Year 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remaining Residential Customer Revenue</td>
<td>3,040,000</td>
<td>2,404,480</td>
<td>1,899,290</td>
<td>1,502,818</td>
<td>1,188,576</td>
<td>939,256</td>
<td>736,854</td>
<td>573,092</td>
<td>452,020</td>
<td>350,555</td>
<td>276,445</td>
</tr>
<tr>
<td>Net Tangible Assets as % of Revenue</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Remaining Residential Customer Tangible Assets</td>
<td>2,432,000</td>
<td>1,923,584</td>
<td>1,519,432</td>
<td>1,202,254</td>
<td>950,861</td>
<td>751,405</td>
<td>589,483</td>
<td>458,474</td>
<td>361,616</td>
<td>280,444</td>
<td>221,156</td>
</tr>
<tr>
<td>Capital Charge ROI %</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Capital Charge on the Tangible Assets</td>
<td>243,200</td>
<td>192,358</td>
<td>151,943</td>
<td>120,225</td>
<td>95,086</td>
<td>75,141</td>
<td>58,948</td>
<td>45,847</td>
<td>36,162</td>
<td>28,044</td>
<td>22,116</td>
</tr>
</tbody>
</table>
the assembled workforce should be valued:

1. to properly calculate any appropriate contributory asset charge for any income approach intangible assets and
2. to ensure that the residual amount of goodwill is at least equal to the amount of the implied fair value of the acquired assembled workforce.

Let’s assume that the Bravo plant operates with 50 employees. There are three principal staff levels at Bravo; let’s call these levels executives, technicians, and administrative staff.

Bravo retained an analyst to estimate the fair value of its assembled workforce intangible asset as of January 1, 2017. The analyst decided to use the cost approach and the RPCNLD method to estimate the fair value of the Bravo assembled workforce for acquisition accounting purposes.

Exhibit 10 summarizes the reproduction cost new (“RPCN”) component of the Bravo assembled workforce RPCNLD method analysis. In this RPCN calculation, the analyst considers all four components of intangible asset cost: direct costs, indirect costs, developer’s profit, and entrepreneurial incentive. The analyst considered all four cost components in the calculation of the current (valuation date) cost to recruit, hire, and train the recreated Bravo assembled workforce.

The analyst’s cost-related due diligence considerations are summarized next.

### Reproduction Cost New—Direct Costs and Indirect Costs

The RPCN estimate considers the total compensation paid to each Bravo employee, labelled as “average salary” on Exhibit 10. These costs are considered to be direct costs. These costs are typically paid to the subject employees. The RPCN estimate considers all of the other expenses that the acquired entity would incur related to each employee. These other costs are considered indirect costs and include the following:

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.

These indirect costs are typically paid on behalf of the subject employees to parties outside of the employer.

The total annual cost that the subject entity pays for an employee is often called the full absorption cost. This full absorption cost includes the following:

1. The compensation paid by the employer to the employee
2. The expenses paid by the employer to others so that the employee can perform his or her job

The RPCN includes all of the costs that the employer would incur to recreate the current assembled workforce with a new (but directly comparable) workforce. These costs may include the following:

1. Advertising for recruiting potential new employees to apply for each position
### Exhibit 10
**Bravo Electric Company**
**Trained and Assembled Workforce Valuation**
**Cost Approach RPCNLD Method**
**As of January 1, 2017**

<table>
<thead>
<tr>
<th>Bravo Assembled Workforce Employee Component</th>
<th>Number of Employees</th>
<th>Average Annual Salary</th>
<th>Other Factor</th>
<th>Full Absorption Cost</th>
<th>Percent of Annual Full Absorption Cost</th>
<th>Percent of Full Absorption New Reproduce Cost to Reproduction Cost New Reproduction Component</th>
<th>Total Reproduction Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executives</td>
<td>10</td>
<td>$180,000</td>
<td>1.6</td>
<td>288,000</td>
<td>20%</td>
<td>80%</td>
<td>$2,304,000</td>
</tr>
<tr>
<td>Technicians</td>
<td>20</td>
<td>$60,000</td>
<td>1.5</td>
<td>90,000</td>
<td>10%</td>
<td>50%</td>
<td>$900,000</td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>20</td>
<td>$40,000</td>
<td>1.4</td>
<td>56,000</td>
<td>5%</td>
<td>40%</td>
<td>$448,000</td>
</tr>
<tr>
<td><strong>Total Employees</strong></td>
<td><strong>50</strong></td>
<td><strong>$1,800,000</strong></td>
<td><strong>1.6</strong></td>
<td><strong>$2,454,000</strong></td>
<td><strong>20%</strong></td>
<td><strong>80%</strong></td>
<td><strong>$4,656,000</strong></td>
</tr>
</tbody>
</table>

Add: Developer's Profit Cost Component:
- Developer's Profit Margin: 10%
- Developer's Profit Cost Component (rounded): $365,000

Total Direct Costs and Indirect Costs and Developer's Profit: $4,017,000

Add: Entrepreneurial Incentive Cost Component:
- Estimated Total Workforce Replacement Period: 6 Months
- Estimated Average Workforce Reproduction 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 Workforce Recreation Period (16% ÷ 2): 8%
- Entrepreneurial Incentive Cost Component (i.e., $2,009,000 × 8% [rounded]): $161,000
- Equals: Total Reproduction Cost New: $4,178,000
2. Interviewing expenses, background checks, and other pre-employment tests; and placement fees incurred to have the new employees show up on their first day of employment.

3. On-the-job training in the particular position including first month training, first year training, and accumulated continuing education for the long-term employee.

**Reproduction Cost New—Developer’s Profit and Entrepreneurial Incentive**

There are two additional cost components for the analyst to consider in the RPCN calculation:

1. Developer’s profit
2. 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 an independent firm to recreate the subject assembled workforce. Likewise, the assembled workforce owner/operator (i.e., the target company) would expect to earn a profit on the sale of its internally developed intangible assets to the willing buyer/acquirer.

There are several generally accepted alternative procedures for estimating the entrepreneurial incentive cost component. One common procedure is to estimate the lost-profits-related opportunity cost that the acquiree entity would experience during the intangible asset recreation period. When using this entrepreneurial incentive measurement procedure, the analyst should appropriately allocate the subject entity’s overall operating profit (i.e., the total opportunity cost during the intangible asset recreation period) to all of the recreated intangible assets.

For example, let’s assume that the acquiree company has five intangible assets that are valued by reference to the cost approach. As in any cost approach analysis, the analyst considers if there is any deterioration or obsolescence related to this acquired intangible asset.

From the valuation due diligence process, the analyst learned the following facts about the Bravo workforce:

1. Two of the technicians are scheduled to retire in the next year or so.
2. One of the administrative staff is out on disability leave and is not expected to return to work.
3. Bravo is overstaffed with regard to administrative staff; in addition to the administrative employee who is on disability leave, any market participant willing buyer would be expected to eliminate two of the administrative positions.
4. Bravo has experienced very low employee turnover of its technician staff. Because of their long tenure, these technicians earn an average annual salary of $60,000. If the actual technicians were replaced, they would be replaced with adequately qualified (but less tenured) employees earning an average annual salary of $52,500.

Exhibit 11 summarizes the analyst’s physical depreciation analysis with regard to the assembled workforce. Three employees are either not physically on the job—or are not physically needed to be on the job. One employee is on disability leave and is not expected to be replaced. Two of the current employees will retire soon.

The market participant acquirer would not pay the acquiree company for workforce reproduction costs that the acquirer will, in fact, have to incur in the very near future. The analyst has to eliminate (through depreciation) the RPCN factor for these three employees from the assembled workforce fair value valuation.

Exhibit 12 summarizes the analyst’s functional obsolescence analysis. Functional obsolescence includes a value decrement for intangible assets that are either:

1. inadequate or
2. superadequate.

Exhibit 11 summarizes the analyst’s physical depreciation analysis with regard to the assembled workforce. Three employees are either not physically on the job—or are not physically needed to be on the job. One employee is on disability leave and is not expected to be replaced. Two of the current employees will retire soon.

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The market participant acquirer would not pay the acquiree company for workforce reproduction costs that the acquirer will, in fact, have to incur in the very near future. The analyst has to eliminate (through depreciation) the RPCN factor for these three employees from the assembled workforce fair value valuation.

**Illustrative Depreciation Analysis Considerations**

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

The Bravo assembled workforce RPCN is the sum of all four cost components calculated by the analyst. Now, let’s consider the depreciation and obsolescence adjustment to the Bravo RPCN calculation.
## Exhibit 11
**Bravo Electric Company**
**Trained and Assembled Workforce Valuation**
**Physical Deterioration**
**As of January 1, 2017**

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

## Exhibit 12
**Bravo Electric Company**
**Trained and Assembled Workforce Valuation**
**Functional Obsolescence**
**As of January 1, 2017**

<table>
<thead>
<tr>
<th>Assembled Workforce Components</th>
<th>No. of Employees</th>
<th>Excess Direct and Indirect Reproduction Cost New (B)</th>
<th>Excess Developer’s Profit and Entrepreneurial Incentive Cost Component (C)</th>
<th>Excess Total Reproduction Cost New (B + C)</th>
<th>Functional Obsolescence (A × (B + C))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technicians</td>
<td>18</td>
<td>$7,500</td>
<td>$1,100</td>
<td>$8,600</td>
<td>$154,800</td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>2</td>
<td>22,400</td>
<td>3,200</td>
<td>25,600</td>
<td>51,200</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$206,000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Exhibit 13
**Bravo Electric Company**
**Trained and Assembled Workforce Valuation**
**Cost Approach RPCNLD Method**
**As of January 1, 2017**

<table>
<thead>
<tr>
<th>Cost Approach Analysis</th>
<th>Cost Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproduction Cost New (all 50 employees)</td>
<td>$4,178,000</td>
</tr>
<tr>
<td>Less: Physical Deterioration Allowance (limited life staff)</td>
<td>128,600</td>
</tr>
<tr>
<td>Less: Functional Obsolescence Allowance (inadequate staff and superadequate staff)</td>
<td>206,000</td>
</tr>
</tbody>
</table>
not continue to employ. The acquirer will not pay the acquiree for the RPCN related to these inadequate employees. Bravo has 18 superadequate employees—that is, employees who are overtrained, overqualified, and overpaid. The acquirer will not pay the acquiree for the excess compensation (above replacement level of compensation) level RPCN component for these 18 employees.

For the assembled workforce intangible asset, Exhibit 13 summarizes the analyst's calculation of reproduction cost new less physical depreciation and less functional obsolescence.

This RPCNLD conclusion indicates what a market participant willing buyer would pay to an acquiree company willing seller for this assembled workforce, assuming that there is no economic obsolescence related to this intangible asset. To complete the cost approach analysis, the analyst has to test for economic obsolescence at the intangible asset owner/operator.

Exhibit 14 summarizes the analyst's illustrative measure of intangible asset owner/operator economic obsolescence. Based on a rigorous due diligence, the analyst decided that there were six performance metrics that could be used to measure economic obsolescence (if any) at Bravo.

That due diligence also revealed the appropriate benchmark measures or benchmark time periods that the analyst could use to compare (1) the Bravo operations without/before economic obsolescence to (2) the Bravo current operations with economic obsolescence.

Exhibit 15 summarizes the analyst's calculation of the assembled workforce economic obsolescence amount.

Illustrative Cost Approach Example
Conclusion
Exhibit 16 summarizes the analyst's cost approach measurement of the fair value of the Bravo assembled workforce intangible asset as of the January 1, 2017, valuation date.

Market Approach Illustrative Example
This illustrative example summarizes a market approach analysis of acquired trademarks and trade names. Trademarks and trade names are common marketing-related intangible assets considered in many fair value valuations. In this example let's assume that Charlie Company (“Charlie”) is a cellular telephone services company.

The Charlie stock was acquired by Consolidated Telecom Company. This acquisition was accounted for as a business combination under the provisions of ASC 805. The appropriate business combination valuation date was January 1, 2017.

The Charlie trademarks and trade names are an important identifiable intangible asset for the acquiree company. For ASC 805 acquisition accounting purposes, the appropriate standard of value is fair value. Based on the analyst's HABU analysis, the appropriate premise of value is value in continued use.

Charlie retained an analyst to estimate the fair value of the acquired trademarks and trade names intangible asset. The analyst decided to use the market approach and the relief from royalty (“RFR”) method to value the identifiable intangible asset.

Charlie management provided the analyst with a long-term financial forecast. The analyst performed a rigorous due diligence process, and the analyst concluded that the appropriate UEL is 20 years before the subject trademarks. The reasons for this UEL estimate were described in the fair value valuation report and documented in the fair value valuation work papers.

Let's assume that the Charlie WACC is 11 percent. This 11 percent WACC is also the weighted average return on assets (“WARA”) that results from the analyst's total purchase price allocation. And, let's assume that this 11 percent WACC is also the overall acquisition price/deal structure IRR.

Common Intellectual Property License Transaction Databases
First, the analyst performed due diligence with regard to the Charlie ownership of the subject trademarks and with regard to the subject intellectual property ownership interests.

Second, the analyst performed due diligence with regard to the Charlie operation of the subject trademarks and with regard to the economic benefit of the trademarks to Charlie.

After selecting the RFR method as the most appropriate valuation method, the analyst searched for arm's-length trademark license agreements between independent parties that could serve as comparable uncontrolled transactions (or “CUTs”). The analyst consulted several commercially available databases in the search for trademark CUTs that would provide empirical evidence of market participant trademark/license royalty rates.

The analyst researched cellular-telephone-related CUT intellectual property license agreements by accessing the following databases:
## Exhibit 14

**Bravo Electric Company**  
Trained and Assembled Workforce Valuation  
Economic Obsolescence  
As of January 1, 2017

<table>
<thead>
<tr>
<th>Metric Item</th>
<th>Bravo Financial or Operational Performance Metric</th>
<th>Benchmark Measure</th>
<th>LTM Percent Shortfall Compared to Benchmark</th>
<th>Benchmark Comparison Reference Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Average Collected Revenue per Employee</td>
<td>$340,000</td>
<td>$420,000</td>
<td>19%</td>
<td>2016 Industry Average</td>
</tr>
<tr>
<td>2 Annual Growth Rate in the Entity Revenue</td>
<td>3.5%</td>
<td>4.5%</td>
<td>22%</td>
<td>Actual Bravo Average for 2012–2016</td>
</tr>
<tr>
<td>3 Profit Margin</td>
<td>10%</td>
<td>14%</td>
<td>29%</td>
<td>2016 Industry Average</td>
</tr>
<tr>
<td>4 Profit Contribution Margin</td>
<td>55%</td>
<td>67%</td>
<td>18%</td>
<td>2016 Industry Average</td>
</tr>
<tr>
<td>5 Return on the Entity Average Assets</td>
<td>10%</td>
<td>12.5%</td>
<td>20%</td>
<td>Actual Bravo Average for 2012–2016</td>
</tr>
<tr>
<td>6 Return on the Entity Average Equity</td>
<td>20%</td>
<td>25%</td>
<td>20%</td>
<td>Actual Bravo Average for 2012–2016</td>
</tr>
<tr>
<td>LTM Benchmark Measures Percent Shortfall:</td>
<td>Mean Percent 21.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Median Percent 20.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mode Percent 20.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trimmed Mean Percent 20.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trimmed Median Percent 20.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected Economic Obsolescence Percent</td>
<td>20.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
RoyaltySource (www.royaltysource.com)—The AUS Consultants database provides intellectual property license transaction royalty rates. The database can be searched by industry, technology, and/or keyword. The information includes royalty rates, name of the licensee and the licensor, a description of property licensed (or sold), the transaction terms, and the original information sources.

RoyaltyStat, LLC (www.royaltystat.com)—RoyaltyStat is a subscription-based database of intellectual property license royalty rates and license agreements, compiled from Securities and Exchange Commission documents. The database is searchable by SIC code or by full text.

ktMINE (www.bvmarketdata.com)—ktMINE is an interactive database that provides direct access to intellectual property license royalty rates, actual license agreements, and detailed agreement summaries. In this database, intellectual property license agreements are searchable by industry, keyword, and various other parameters.

Selected CUT Trademark License Agreements

The analyst documented the CUT search criteria. The analyst documented the CUT selection criteria. The analyst documented the reasons for each potential CUT that was selected. And, the analyst documented the reasons for each potential CUT that was rejected. The analyst reviewed each CUT license agreement. And, the analyst confirmed each CUT license pricing formula.

The analyst documented the selected comparison methods (e.g., territory, products covered, exclusivity, licensor requirements, license rights, renewal options, and license terms). And, the analyst assembled (and normalized) the relevant royalty-related pricing data with regard to the selected CUT licenses.

Exhibit 17 summarizes the relevant license pricing and other data with regard to the analyst’s selected CUT trademark licenses. (The Exhibit 17 data are hypothetical and were materially modified for the purposes of this illustrative example.)

Exhibit 18 summarizes the analyst’s quantitative analysis of the CUT license agreement royalty rate data.

Comparing (1) the Charlie trademarks to (2) the selected CUT license trademarks, the analyst

Exhibit 15
Bravo Electric Company
Trained and Assembled Workforce Valuation
Economic Obsolescence
As of January 1, 2017

Cost Approach Analysis

<table>
<thead>
<tr>
<th>Cost Approach Component</th>
<th>Reproduction Cost New less Physical Depreciation and Functional Obsolescence</th>
<th>Selected Economic Obsolescence Percent</th>
<th>Economic Obsolescence Allowance (rounded)</th>
</tr>
</thead>
</table>

Exhibit 16
Bravo Electric Company
Trained and Assembled Workforce Valuation
Cost Approach Valuation Synthesis and Conclusion
As of January 1, 2017

Cost Approach Analysis

|-------------------------|-----------------------|----------------------------------|----------------------------------|-------------------------------|-----------------------------------------|

Trained and Assembled Workforce Fair Value (rounded)
<table>
<thead>
<tr>
<th>Trademark Licensor</th>
<th>Trademark Licensee</th>
<th>Comparable Uncontrolled Transaction Trademark License Summary Description</th>
<th>License Start Year</th>
<th>License Term</th>
<th>License Royalty Rate Range % of Revenue Low</th>
<th>License Royalty Rate Range % of Revenue High</th>
<th>License Upfront/Other Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwestern Bell Telephone Company</td>
<td>Telecom Group</td>
<td>Telecom Group agreed to a royalty for the exclusive right to the name, reputation, and public image of the Southwestern Bell Telephone Company.</td>
<td>2014</td>
<td>10 years</td>
<td>5.0%</td>
<td>5.0%</td>
<td>NA</td>
</tr>
<tr>
<td>Cable and Wireless PLC</td>
<td>Hong Kong Telecommunications Ltd.</td>
<td>Cable and Wireless entered into an exclusive agreement with a Hong Kong telephone company for the use of its trademarks (in particular, use of the telecommunication name and logo in connection with international business) on relevant products and services.</td>
<td>2012</td>
<td>10 years</td>
<td>4.0%</td>
<td>4.0%</td>
<td>NA</td>
</tr>
<tr>
<td>AT&amp;T Corp.</td>
<td>KIRI Inc.</td>
<td>AT&amp;T grants to KIRI an exclusive license to use the licensed marks (AT&amp;T and globe design logo) solely in connection with the marketing, advertising, promotion, and provision of the licensed services (such as telecommunication and Internet services) in the licensed territory.</td>
<td>2013</td>
<td>5 years</td>
<td>2.5%</td>
<td>4.0%</td>
<td>$2.5 million minimum guarantee</td>
</tr>
<tr>
<td>Nextel</td>
<td>Nextel Partners</td>
<td>A contract between a private U.S. company and a publicly owned U.K. spin-off company includes an exclusive license agreement for the right to use the Nextel brand name. The licensee owns its own spectrum and provides services to the public as Nextel.</td>
<td>2015</td>
<td>5 years</td>
<td>1.5%</td>
<td>2.0%</td>
<td>NA</td>
</tr>
<tr>
<td>France Telecom (Orange Brand Services Limited, UK)</td>
<td>PTK Centertel</td>
<td>PTK Centertel is rebranding its name from Idea to Orange. Idea, which now holds 32.2% of the market, will change its name and logo (trademark). PTK Centertel will pay to France Telecom a royalty for the exclusive use of the Orange name and mark.</td>
<td>2016</td>
<td>5 years</td>
<td>1.6%</td>
<td>1.6%</td>
<td>NA</td>
</tr>
<tr>
<td>Global Communications International, Inc.</td>
<td>Unical Enterprises, Inc.</td>
<td>Unical licensed from Global an exclusive right to use the following trademarks: Techline, Easytouch, Favorite, Classic Favorite, Classic Favorite Plus, Phototouch, Choice, Competitor, Competitor Plus, Roommate, Plaza, Favorite Plus, Easycall, Big Button, EZ Button, Cleartech, Favorite Messenger II, Digimate, Mountain Bell, B Office, Bell Symbol, Bell Mark, Northwestern Bell. All of the above are in connection with corded telephones, cordless telephones, answering machines, and integrated telephone/answering devices.</td>
<td>2015</td>
<td>10 years</td>
<td>2.1%</td>
<td>2.2%</td>
<td>NA</td>
</tr>
<tr>
<td>Virgin Enterprises Limited</td>
<td>NTL Inc.</td>
<td>NTL entered into a trademark license agreement under which it is entitled to use specified Virgin trademarks within the U.K. and Ireland related to Internet, television, fixed line telephony, and mobile telephony.</td>
<td>2015</td>
<td>10 years</td>
<td>1.25%</td>
<td>1.25%</td>
<td>£8.5 million minimum annual royalty</td>
</tr>
</tbody>
</table>
considered trademark use, territory, products, market size, market growth rate, user size, user profitability, trademark-related profit potential, and other factors. Based on this comparative analysis, the analyst concluded that the Charlie trademarks deserved a royalty rate that was slightly below the mean and median royalty rates—but higher than the first (i.e., the low) quartile royalty rate.

The analyst selected a 2 percent of revenue royalty rate to apply to the Charlie trademark RFR method analysis. The analyst also selected this royalty rate so as to consider the expense to the licensor of maintaining the licensed trademark over the expected 20-year trademark UEL period.

Exhibit 19 summarizes the analyst’s market approach RFR method fair value valuation analysis. This analysis incorporates the royalty relief analysis over both (1) a 5-year discrete projection period and (2) a 15-year terminal value projection period. The total 20-year term of this projection period equals the analyst’s estimate of the Charlie trademark UEL.

Based on this market approach and relief from royalty method valuation analysis, the analyst concluded the fair value of the Charlie trademarks and trade names as of the business combination valuation date.

### Reconciliation of WACC, WARA, and IRR

The prior three examples illustrated the application of the income approach, the cost approach, and the market approach, respectively, in the fair value valuation of acquired intangible assets. At the conclusion of the intangible asset valuation process, there is an additional procedure that is important in the acquisition accounting valuation.

In the earlier stages of the fair value valuation, the analyst mathematically concluded (and documented in the valuation work papers) that the purchase price allocation implied WARA is consistent with both:

1. the acquiree’s WACC used in the fair value valuation and
2. the deal IRR expected by the corporate acquirer.

In particular, the MPF indicates that this WACC/IRR/WARA reconciliation is an important part of the fair value valuation process for acquisition accounting purposes. Therefore, the following example presents an illustration of the analyst’s comparison of:

1. the acquiree company-based WACC,
2. the acquirer company-base IRR, and
3. the purchase price allocation-based WARA.

This illustrative example relates to the hypothetical Delta Company that was acquired in February 2017. The analyst was retained to perform the fair value valuation for acquisition accounting purposes.

### Illustrative Reconciliation of WACC to WARA to IRR

Let’s assume that 100 percent of the Delta Company (“Delta”) stock is acquired by Acquirer Corporation (“Acquirer”) for a total acquisition purchase price of

---

**Exhibit 18**

**Charlie Company Trademarks and Trade Names**

**Market Approach Relief from Royalty Method Analysis of CUT Trademark License Data**

<table>
<thead>
<tr>
<th>License Royalty Rate</th>
<th>Low Royalty Rate Indications</th>
<th>High Royalty Rate Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Royalty Rate</td>
<td>5.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Low Royalty Rate</td>
<td>1.3%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Mean Royalty Rate</td>
<td>2.9%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Median Royalty Rate</td>
<td>2.1%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Trimmed Mean Royalty Rate</td>
<td>2.3%</td>
<td>2.8%</td>
</tr>
<tr>
<td>First Quartile Royalty Rate</td>
<td>1.4%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Third Quartile Royalty Rate</td>
<td>4.5%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Analyst’s Selection of the Appropriate Charlie Trademark Royalty Rate = 2%
### Exhibit 19

| Charlie Company Trademarks and Trade Names | Market Approach Relief from Royalty Method |
| Fair Value Valuation Summary | As of January 1, 2017 |

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Management–Provided Revenue Projection [a]</td>
<td>8,634,139</td>
<td>8,358,945</td>
<td>8,042,393</td>
<td>7,720,369</td>
<td>7,377,326</td>
</tr>
<tr>
<td>Selected Trademark License Royalty Rate [b]</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Projected Pretax Trademark Royalty Expense Relief</td>
<td>172,683</td>
<td>167,179</td>
<td>160,848</td>
<td>154,407</td>
<td>147,547</td>
</tr>
<tr>
<td>Less: Projected Income Tax Rate [c]</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
</tr>
<tr>
<td>Projected After-Tax Trademark Royalty Expense Relief</td>
<td>108,790</td>
<td>105,323</td>
<td>101,334</td>
<td>97,277</td>
<td>92,954</td>
</tr>
<tr>
<td>Discounting Period [d]</td>
<td>0.5000</td>
<td>1.5000</td>
<td>2.5000</td>
<td>3.5000</td>
<td>4.5000</td>
</tr>
<tr>
<td>Present Value Factor @ 11% [e]</td>
<td>0.9492</td>
<td>0.8551</td>
<td>0.7704</td>
<td>0.6940</td>
<td>0.6252</td>
</tr>
<tr>
<td>Present Value of Trademark Royalty Relief</td>
<td>103,264</td>
<td>90,061</td>
<td>78,068</td>
<td>67,510</td>
<td>58,115</td>
</tr>
<tr>
<td>Sum of Present Values of Trademark Royalty Relief</td>
<td>397,018</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Present Value of Terminal Period Trademark Royalty Expense Relief:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal 2022 Normalized Trademark Royalty Expense Relief [f]</td>
</tr>
<tr>
<td>Direct Capitalization Multiple [g]</td>
</tr>
<tr>
<td>Terminal Value of Trademark Royalty Expense Relief</td>
</tr>
<tr>
<td>Present Value Factor @ 11% [e]</td>
</tr>
<tr>
<td>Present Value of Terminal Value</td>
</tr>
</tbody>
</table>

Trademark Valuation Summary:

| Present Value of Discrete Period Trademark Royalty Expense Relief | $397,018 |
| Present Value of Terminal Period Trademark Royalty Expense Relief | 440,452 |
| Fair Value of the Charlie Trademarks (rounded) | $840,000 |

[a] Revenue projection provided by Charlie management and subject to analyst due diligence; this revenue projection is consistent with the acquirer’s transaction-related long-range financial plan.

[b] Based on the analyst’s review of arm’s-length license agreements between parties for similar intellectual property.

[c] Based on the market participant expected effective income tax rate.

[d] Calculated as if cash flow is received at midyear.

[e] Based on the Charlie weighted average cost of capital.

[f] Based on the 2021 projected after-tax trademark royalty expense relief and an expected long-term growth rate of 0 percent.

[g] Based on a present value of an annuity factor for an 11 percent discount rate and a remaining 15-year expected UEL (after the 5-year discrete projection period).
Let’s assume that the business combination transaction closes on January 20, 2017.

Let’s assume that the analyst performed (and documented) a rigorous review of the Acquirer’s target company cash flow projections. The analyst performed this due diligence in order to calculate the transaction-price-implied IRR. The analyst performed an acquiree company WACC calculation in order to conclude the appropriate present value discount rate (and direct capitalization rate) to use in the income approach valuation analyses.

The analyst concluded the fair value for all of the acquired Delta net working capital assets, tangible assets, and intangible assets (including the residual amount for the acquired goodwill).

The analyst concluded the purchase price allocation WARA based on the concluded fair value indications for each of the categories of acquired Delta assets.

To confirm the reasonableness of the fair value purchase price allocation, the analyst compared (1) the transaction price IRR to (2) the acquiree company WACC to (3) the fair value purchase price allocation WARA.

Exhibit 20 summarizes the analyst’s IRR calculation, based on (1) the total transaction consideration of $7,283,850 and (2) the Acquirer-prepared financial projections used to price the business combination transaction.

The analyst solved for the IRR that caused the sum of (1) the present value of the discrete projection period net cash flow and (2) the present value of the terminal period to equal (3) the $7,283,850 total transaction price. That calculated IRR was 11.8 percent. For comparison purposes, the analyst rounded the 11.8 percent calculated IRR to 12 percent.

Exhibit 21 summarizes the WACC calculation that the analyst performed to conclude the present value discount rate (and the direct capitalization rate) to use in the Delta fair value valuations. The Exhibit 21 data are hypothetical and are presented for illustrative purposes only.

Based on the WACC analysis, the analyst concluded that the appropriate present value discount rate was 12 percent (rounded). This 12 percent WACC-based discount rate is consistent with the Acquirer’s transaction-analysis-based 12 percent IRR.

Exhibit 22 summarizes the analyst’s WARA analysis. Exhibit 22 presents each of the Delta acquired asset categories. Exhibit 22 includes the fair value indications for each of the asset categories valued by the analyst—including the residual calculation of the acquired goodwill.

Exhibit 22 presents the analyst’s determination of a fair, market-derived rate of return on each of the acquired asset categories. And, Exhibit 22 presents the calculation of the weighted return on assets for each of the acquired asset categories.

Based on the Exhibit 22 analysis, the WARA implied by the analyst’s purchase price allocation was 12 percent (rounded). That fair value valuation 12 percent WARA compares to the 12 percent Delta WACC and the 12 percent Acquirer IRR. Accordingly, this WARA/WACC/IRR reconciliation gives the analyst comfort with regard to the acquisition accounting fair value conclusions.

### Attributes of a Fair Value Valuation Report

The MPF provides considerable guidance with regard to the documentation that should be included in a fair value valuation report prepared for acquisition accounting purposes. This MPF guidance extends to the reporting of intangible asset fair value valuations prepared for ASC 805 compliance purposes.

In order to encourage the valuation report reader’s acceptance and to comply with the MPF, the intangible asset fair value valuation report should be:

- clear, convincing, and cogent;
- well-organized, well-written, and well-presented;
- free of grammar, punctuation, spelling, and mathematical errors; and
- procedurally and mathematically replicable, without the reliance on any unexplained or unsourced valuation variables.

Whether the fair value valuation report is a “comprehensive valuation report” or an “abbreviated valuation report” (as those terms are defined in the MPF), the intangible asset fair value valuation report should tell a narrative story that:

- defines the analyst’s valuation assignment;
- describes the analyst’s data gathering and due diligence procedures;
- justifies the analyst’s selection of (and rejection of) each of the generally accepted valuation approaches, methods, and procedures;
- explains how the analyst performed the valuation synthesis and reached the final fair value conclusion;
- defends the analyst’s intangible asset fair value conclusion; and
### Exhibit 20

**Delta Company**

**Illustrative Purchase Price Allocation**

**Acquisition-Related Financial Projections**

**Internal Rate of Return Calculation**

As of January 20, 2017

#### Acquirer’s Acquisition-Related Financial Projections

<table>
<thead>
<tr>
<th>Present Value of Discrete Period Net Cash Flow:</th>
<th>Projected Fiscal Years Ending December 31,</th>
<th>Normalized</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td>Net Operating Income (after tax)</td>
<td>$736,209</td>
<td>$636,207</td>
</tr>
<tr>
<td>Noncash Expense (i.e., depreciation expense)</td>
<td>3,615</td>
<td>3,723</td>
</tr>
<tr>
<td>Capital Expenditures</td>
<td>(4,016)</td>
<td>(4,137)</td>
</tr>
<tr>
<td>Change in Net Working Capital</td>
<td>(10,093)</td>
<td>(11,869)</td>
</tr>
<tr>
<td>Net Cash Flow</td>
<td>728,715</td>
<td>623,924</td>
</tr>
<tr>
<td>Months Remaining in the Initial Projection Year</td>
<td>11.21</td>
<td></td>
</tr>
<tr>
<td>Adjusted Net Cash Flow</td>
<td>677,690</td>
<td></td>
</tr>
<tr>
<td>Discounting Period</td>
<td>0.4517</td>
<td>1.4035</td>
</tr>
<tr>
<td>Delta Present Value Factor @ 11.8%</td>
<td>0.9508</td>
<td>0.8550</td>
</tr>
<tr>
<td>Present Value of Net Cash Flow</td>
<td>$644,348</td>
<td>$533,453</td>
</tr>
<tr>
<td>Total Present Value of Discrete Period Net Cash Flow</td>
<td>$2,525,207</td>
<td></td>
</tr>
</tbody>
</table>

#### Acquirer Acquisition-Related Financial Projections

<table>
<thead>
<tr>
<th>Present Value of Terminal Period Net Cash Flow:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal 2022 Net Cash Flow (2021 NCF + 2%)</td>
</tr>
<tr>
<td>÷ Delta Direct Capitalization Rate (11.8% – 2%)</td>
</tr>
<tr>
<td>= Terminal Value</td>
</tr>
<tr>
<td>× Delta Present Value Factor @ 11.8 Percent</td>
</tr>
<tr>
<td>= Present Value of Terminal Period Net Cash Flow</td>
</tr>
</tbody>
</table>

**Value Summary:**

- Discrete Period Net Cash Flow Present Value | $2,525,207 |
- Terminal Period Net Cash Flow Present Value | $4,255,497 |
- Business Enterprise Value                   | 6,780,704 |
- Cash and Cash Equivalents                   | 506,946  |
- Total Transaction Purchase Price            | $7,287,650 |

Transaction Implied Internal Rate of Return | 11.8% |
Transaction Price IRR (rounded) | 12% |
## Exhibit 21
Delta Company
Illustrative Purchase Price Allocation
Weighted Average Cost of Capital
As of January 20, 2017

<table>
<thead>
<tr>
<th>Present Value Discount Rate and Direct Capitalization Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost of Equity Capital:</strong></td>
</tr>
<tr>
<td><strong>Model #1: Modified Capital Asset Pricing Model:</strong></td>
</tr>
<tr>
<td>General Equity Risk Premium</td>
</tr>
<tr>
<td>Size Equity Risk Premium</td>
</tr>
<tr>
<td>Indicated Cost of Equity Capital</td>
</tr>
<tr>
<td><strong>Model #2: Build-Up Model:</strong></td>
</tr>
<tr>
<td>General Equity Risk Premium</td>
</tr>
<tr>
<td>Industry Equity Risk Premium</td>
</tr>
<tr>
<td>Size Equity Risk Premium</td>
</tr>
<tr>
<td>Indicated Cost of Equity Capital</td>
</tr>
<tr>
<td><strong>Selected Cost of Equity Capital</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost of Debt Capital:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source:</strong></td>
</tr>
<tr>
<td>Before-Tax Cost of Debt Capital</td>
</tr>
<tr>
<td>Income Tax Rate</td>
</tr>
<tr>
<td><strong>Selected Cost of Debt Capital</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weighted Average Cost of Capital Calculation:</th>
<th><strong>Source:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected Cost of Equity Capital</td>
<td>12.5%</td>
</tr>
<tr>
<td>Multiplied by: Equity/Invested Capital (based on SIC code 36)</td>
<td>99.0%</td>
</tr>
<tr>
<td>Equals: Weighted Cost of Equity Capital</td>
<td>12.4%</td>
</tr>
<tr>
<td>Multiplied by: Debt/Invested Capital (based on SIC code 36)</td>
<td>1.0%</td>
</tr>
<tr>
<td>Equals: Weighted Cost of Debt Capital</td>
<td>0.03%</td>
</tr>
<tr>
<td><strong>Weighted Average Cost of Capital (rounded)</strong></td>
<td>12%</td>
</tr>
<tr>
<td>Less: Expected Long-Term Growth Rate (rounded)</td>
<td>2%</td>
</tr>
<tr>
<td>Equals: Direct Capitalization Rate (rounded)</td>
<td>10%</td>
</tr>
</tbody>
</table>
describes all of the data sources that the analyst relied on (and includes exhibit or appendix copies of any nonpublic source documents).

**Summary and Conclusion**

This discussion focused on the types of identifiable intangible assets that are typically considered in an ASC 805 acquisition accounting valuation. This discussion also considered what is not an identifiable intangible asset for business combination fair value valuation purposes.

This discussion described the common elements of the identifiable intangible asset fair value valuation. This discussion presented an illustrative income approach valuation analysis of an identifiable intangible asset. This discussion presented an illustrative cost approach valuation analysis of an identifiable intangible asset. And, this discussion presented an illustrative market approach valuation analysis of an identifiable intangible asset.

This discussion summarized the analyst’s considerations with regard to the intangible asset fair value valuation synthesis and conclusion. With consideration of the MPF, this discussion summarized the analyst’s considerations with regard to documenting the intangible asset valuation variables in the fair value valuation work file. With consideration of the MPF professional guidance, this discussion summarized the analyst’s considerations for reporting the results of the intangible asset valuation in the fair value valuation report.

This discussion summarized the analyst’s considerations with regard to the development of—and the reporting of—an identifiable intangible asset valuation for ASC 805 acquisition accounting purposes. And, this discussion presented analyst caveats related to the development of—and the reporting of—fair value valuations of identifiable intangible assets acquired in a business combination.

Robert F. Reilly, CPA, is a managing director of the firm and is resident in our Chicago, Illinois, practice office. Robert can be reached at (773) 399-4318 or at rfreilly@willamette.com.