Applications of the Asset-Based Business Valuation Approach

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The asset-based approach is one of the three generally accepted approaches that may be applied in the valuation of closely held businesses, business ownership interests, and securities. Nonetheless, many valuation analysts ("analysts") are not familiar with the application of asset-based approach business valuation methods and procedures. And, many legal counsel—and other parties who rely on business valuations—are not familiar with how to interpret—or how to apply—the results of an asset-based approach business valuation. This discussion summarizes what analysts (and parties who rely on business valuations) need to know about the application of this generally accepted business valuation approach, particularly with regard to the issues of: the concluded premise of value, the concluded level of value, any restrictions on the sale of the subject entity assets, the recognition of an income tax liability related to any asset appreciation, and the measurement of the subject entity goodwill and any other intangible asset value.

Introduction

Most valuation analysts ("analysts")—and many business owners, legal counsel, regulatory and taxation authorities, and others—are familiar with the concept of the asset-based approach to business enterprise valuation.

Analysts (and other parties who rely on business valuations) understand that there are three generally accepted business valuation approaches: the income approach, the market approach, and the asset-based approach. However, most analysts rarely (if ever) apply the asset-based approach as a regular part of their business valuation analyses.

If those analysts have ever applied the asset-based approach, it was probably in the valuation of a real estate holding company or an investment holding company. And, in these instances, the analyst simply may have obtained current "appraised" values for the real estate or the investment portfolio assets that were recorded on the subject company's balance sheet.

To these analysts, the simple substitution of the current values of these recorded assets for the historical costs of the recorded assets constituted an asset-based approach business valuation.

Most accountants and auditors, regulatory and taxing authorities, bankers, corporate acquirers and other investors, lawyers, judicial finders of fact, and other parties that rely on business valuations are even less familiar with the application of the asset-based business valuation approach.

These parties may not expect to see the asset-based approach performed—except with regard to a real estate holding company or other investment holding company—in the typical closely held business valuation. And, these parties may not be comfortable interpreting or relying on asset-based approach valuation analyses and business value conclusions.

Therefore, many analysts may not be adequately trained and experienced in the preparation of an asset-based approach valuation. And, parties that rely on such business valuations may not be

comfortable making decisions based on an asset-based approach valuation.

Often, both analysts and other parties are reluctant to prepare—or to rely on—asset-based approach business valuations. This is because they are uncertain of the answers to the following questions regarding these valuation analyses:

1. Does the asset-based approach conclude a going-concern value or a liquidation value?
2. Which property (or asset) valuation approaches should be used in the application of the asset-based business valuation approach?
3. When is it appropriate to use the capitalized excess earnings method ("CEEM") to conclude intangible value in the nature of goodwill?
4. When is it appropriate to measure economic obsolescence in the cost approach valuation of the entity's tangible assets and intangible assets?
5. When is it appropriate to measure selling expenses (or make-ready costs or holding period expenses) in the market approach valuation of the entity's tangible assets and intangible assets?
6. How should the analyst account for the capital gains tax liability associated with any appreciation of the value of the entity's tangible assets and intangible assets?
7. How does the analyst apply the asset-based approach when the subject entity assets can't be immediately sold (due to contractual or other restrictions)?
8. Do the same (or different) level of value adjustments that apply to the income approach and the market approach (say discounts for lack of control and for lack of marketability) also apply to the asset-based approach?

Each of these procedural application (or "how to") issues will be considered in this discussion. This discussion will be presented from two related perspectives.

First, the discussion will assume that the analyst has performed an asset-based approach analysis. Now the analyst has to decide: how do I interpret the business value indication? For example, is the asset-based approach value indication a going-concern value indication or a liquidation value indication?

Second, the discussion will assume the analyst wants to complete a specified valuation assignment. For example, the assignment could be to estimate the value of a nonmarketable, noncontrolling interest in a certain closely held company. The issue may be: what property valuation methods and procedures should the analyst apply in order to achieve the intended valuation objective?

Consensus regarding the Asset-Based Approach

Before we consider the above-listed issues, let's consider what analysts generally agree are consensus positions with regard to the application of the asset-based approach in a business valuation analysis.

1. The asset-based approach is a generally accepted business valuation approach. With the income approach and the market approach, the asset-based approach is one of three generally accepted business valuation approaches.
2. The asset-based approach can be used to value both asset holding (or property investment) companies and operating companies.
3. The asset-based approach can be used to value both tangible-asset-intensive companies and intangible-asset-intensive companies.
4. All companies (whether operating companies or asset holding companies) are asset-intensive companies. That is, all companies own tangible assets, intangible assets, or both types of assets.
5. The asset-based approach typically concludes a marketable, controlling ownership interest level of value. Therefore, the asset-based approach is more applicable to conclude this level of value.
6. The asset-based approach value indication can be adjusted to indicate a nonmarketable, noncontrolling level of value. However, the analyst should apply care in identifying and quantifying the appropriate discount for lack of control ("DLOC") and discount for lack of marketability ("DLOM").
7. The appropriate DLOC and DLOM adjustments to apply to an asset-based approach value indication may be different than the corresponding valuation adjustments to apply to the income approach or the market approach value indications.

   This is because the application of the asset-based approach assumes a high degree of asset liquidity and a high degree

of ownership control (in order to initiate the hypothetical asset purchase or the hypothetical asset sale process).

8. There are generally accepted asset-based approach business valuation methods. The two most common asset-based approach methods are the asset accumulation ("AA") method and the adjusted net asset value ("ANAV") method.

9. The AA method generally involves the discrete revaluation of each of the entity's individual asset and liability accounts. The ANAV method generally involves the collective revaluation of all of the entity's asset and liability accounts in the aggregate. If all of the analysis valuation variables are applied consistently, the AA method and the ANAV method should conclude the same value for the same business entity.

10. The asset-based approach valuation methods can be applied to conclude various alternative standards (or definitions) of value, including fair value, fair market value, and other standards of value. The valuation procedures performed and the valuation variables selected should be consistent with the standard of value sought.

11. The asset-based approach valuation methods can be applied to conclude various alternative premises of value, including value in continued use and value in liquidation. The valuation procedures performed and the valuation variables selected should be consistent with the premise of value sought.

12. A going-concern premise of value implies that the business owner/operator will recreate the actual business entity.

    The analyst will typically apply cost approach valuation methods to conclude the value of the subject tangible assets and intangible assets as part of a business recreation analysis. A liquidation premise of value implies that the business owner/operator will liquidate the actual business entity.

    The analyst will typically apply market approach valuation methods to conclude the value of the subject tangible assets and intangible assets as part of a business liquidation.

13. The analyst will incorporate income tax considerations in an asset-based approach analysis as appropriate.

    Often, there are few income tax considerations in a going-concern premise valuation. A business typically would not incur an income tax liability if it were to incur the cost of recreating its own assets. A business may incur a deferred income tax liability if the value of its assets has appreciated over time.

    Often, there are many income tax considerations in a liquidation premise valuation. A business typically would incur an immediate income tax liability if it were to sell its own assets.

14. For an asset holding company, an asset-based approach is often relied on to provide the primary value indication. For an operating company, the asset-based approach is not often relied on to provide the primary value indication. For an operating company valuation, the asset-based approach is often relied on in conjunction with other value indications.

    For an operating company, the asset-based approach is sometimes relied on to provide confirmation of the income approach and the market approach value indications.

15. The asset-based approach is not the cost approach. The asset-based approach is a generally accepted business valuation approach. The cost approach is a generally accepted property valuation approach. The valuation method and procedures applied in the asset-based approach are different from the valuation methods and procedures applied in the cost approach.

    Analysts often apply cost approach valuation methods to value certain tangible and intangible asset categories that are included in an asset-based approach business valuation.

    However, analysts also typically apply market approach and income approach valuation methods to value other tangible and intangible asset categories that are included in an asset-based approach business valuation.

The following section considers when and how to apply certain methods and procedures in an asset-based approach business valuation.

When to Apply the Asset-Based Approach

A common nomenclature may be helpful to our discussion. Both parties who rely on business valuations and valuation analysts themselves often use asset-based approach jargon imprecisely.

First, the asset-based approach estimates the value of an entity's equity by reference to the value of the entity's assets minus the value of the entity's liabilities. The important point here is that this valuation approach considers both assets and liabilities—and not just assets.

In applying asset-based approach methods, the analyst may conclude that the value of liabilities may (or may not) be represented by recorded accounting balance. However, the analyst should consciously and carefully reach that conclusion. An analysis that revalues the entity assets only (and that ignores consideration of liability values) is not a proper application of the asset-based approach.

Second, the AA method involves the discrete revaluation of all of the entity asset and liability accounts. Effectively, this analysis starts with a blank balance sheet. The analyst identifies and values each financial asset account, real estate account, tangible personal property account, other asset account, identifiable intangible asset (or intangible personal property account), and a goodwill account value (positive or negative). Next, the analyst identifies and values each current liability account, long-term liability account, and contingent liability account.

This liability valuation analysis includes any accounts that are changed or created as part of the asset valuation process. The sum of the individual asset values less the sum of the individual liability values indicates the entity's total equity value.

This total equity value is typically concluded on the same standard of value (e.g., fair value, fair market value, investment value) that is used to value the individual asset and liability categories. This total equity value is typically concluded on the same premise of value (e.g., going-concern premise, liquidation premise) that is used to value the individual asset and liability categories. And, the total equity value is typically concluded (at least initially) on a marketable, controlling level of value basis.

If another level of value is sought in the analysis, appropriate valuation adjustments (e.g., discounts) should be identified and quantified. And, the level of valuation adjustments appropriate to the asset-based approach value indication may be different than the level of valuation adjustments appropriate to the income approach or the market approach value indications.

Third, the ANAV method involves a collective or aggregate revaluation of the entity's total equity value. Often in the ANAV method, none of the individual asset and liability accounts are revalued. Sometimes in the ANAV method, the analyst may revalue one or more individual asset accounts.

For example, the entity owner/operator may provide the analyst with a current appraisal of the inventory account or of the owned real estate. And, the analyst can incorporate such appraisals into the ANAV analysis.

The ANAV method aggregate equity revaluation is usually measured by the application of the CEEM. The conclusion of this CEEM analysis is the total amount of appreciation (over the recorded accounting balances) for all of the entity's net assets. Net assets are equal to total assets minus total liabilities.

And, the result of this CEEM analysis is often called "intangible value in the nature of goodwill." This wordy title is deliberately intended to distinguish the analysis result from the goodwill amount that would be concluded from an AA method analysis or from a fair value accounting purchase price allocation.

The intangible value in the nature of goodwill is added to the accounting balance of owners' equity. The sum of that addition indicates the defined value indication of the entity's net asset value. If the result of the CEEM analysis is negative, the result is often called economic obsolescence. The same analytical procedure is then called the capitalization of income loss method ("CILM").

Regardless of the name for the method, the negative intangible value is subtracted from the owners' equity accounting balance. The remainder of the subtraction still indicates the defined value indication of the entity's net asset value.

The valuation variables used in the CEEM (or the CILM) should be consistent with the intended standard of value and the intended premise of value. Like the AA method, the ANAV method (at least initially) concludes a marketable, controlling level of value.

Fourth, the asset-based approach is not the same analysis as the cost approach. The asset-based approach is a generally accepted business valuation approach.

The cost approach is a generally accepted property valuation approach. The cost approach is often used to value some (or many) of the entity's asset categories in the application of the asset-based approach. The cost approach is typically not

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applicable to the valuation of the entity's liability categories.

In the valuation of an asset holding company, the analyst may rely on the cost approach and/or the market approach to value all of the entity's individual asset categories. In the valuation of an operating company, the analyst may rely on the cost approach and/or the market approach to value some of the entity's individual asset categories.

However, the analyst will usually rely on the income approach to value at least one intangible asset category in the valuation of an operating company. That asset category may be the entity's goodwill asset category.

The application of the cost approach (versus the market approach and/or the income approach) is important in determining whether the asset-based approach concludes a going-concern premise of value or a liquidation premise of value.

As further described below, the primary use of the cost approach to value the entity's tangible or intangible property typically concludes a going-concern premise of value. The primary use of the market approach to value the entity's tangible or intangible property typically concludes a liquidation premise of value.

And, the primary use of the income approach to value the entity's tangible or intangible property may conclude either a going-concern premise of value or a liquidation premise of value—depending on the individual valuation variables selected for the analysis.

Again, the analyst will apply the income approach (and typically the CEEM) in the valuation of at least one intangible asset in order to conclude a going-concern value for an operating company valuation. That income approach CEEM analysis will typically indicate any intangible value in the nature of goodwill for the profitable operating entity. The income approach CILM analysis will typically indicate any economic obsolescence for the less profitable operating entity.

A significant amount of economic obsolescence concluded in the asset-based approach may indicate that the entity has a lower going-concern value than it does a liquidation value. In other words, the highest and best use ("HABU") of that operating entity may be in liquidation (as compared to in continued operation). Of course, legal/contractual constraints and/or current owner desires may prevent the subject operating entity from achieving that HABU.

In terms of when to apply the asset-based approach, analysts should consider all three generally accepted business valuation approaches in the development of every business valuation.

The asset-based approach is particularly applicable in the following circumstances:

1. It may be particularly relevant if the specific valuation assignment is to identify the value of the entity's component asset categories. This situation may occur in a business valuation performed for certain fair value measurement, bankruptcy, property tax, secured lending, and other purposes. For example, a potential acquirer may want an indication of what a purchase price allocation may look like before making an offer to buy the target entity.
2. It may be important for the party relying on the valuation to understand the factors that contribute to the subject entity value. In other words, the decision maker may want to understand the components of value of the subject entity. An asset-based approach analysis could inform the decision maker as to whether the primary entity value driver is real estate, tangible personal property, proprietary technology, trademarks, franchises, customer relationships, a highly skilled workforce, or any other asset category.
3. The analysis may require concluding alternative standards of value or alternative premises of value for the same subject entity. It is possible—but difficult—to adjust income approach and market approach analyses to conclude different standards of value and different premises of value. It is fairly straightforward to apply alternative asset-based approach procedures and variables to conclude different standards of value and different premises of value for the same entity.
4. The asset-based approach may be the default analysis when the income approach and the market approach are not applicable. The income approach may not be applicable when the entity does not have reliable financial statements—either historical or prospective. The market approach may not be applicable when there are not a sufficient number of sufficiently comparable companies.

That is, there may not be either sufficiently comparable publicly traded companies or sufficiently comparable acquired companies. In such instances, the asset-based approach may be the best valuation approach available.

5. The asset-based approach may be applied to provide a mutually supportive value indication to support the conclusions of the income approach and the market approach. One reason to develop any valuation approach is to provide confirmation of the results of the other valuation analyses.
6. Particularly in a litigation or other controversy context, an analyst may develop an asset-based approach simply to provide additional support for the analyst's expert opinion. The asset-based approach may be presented as either a primary or a supplemental value indication. However, it may be difficult for an opposing expert to rebut the asset-based approach valuation if that expert did not perform his or her own asset-based approach analysis.
7. The asset-based approach valuation is particularly applicable if the subject entity would more likely sell in an asset sale deal structure—as compared to a stock sale deal structure. Smaller closely held companies often transfer as a sale of assets (instead of as a sale of stock). In addition, S corporations (and other tax pass-through entities) of all sizes often transfer as a sale of assets (instead of as a sale of stock).
8. The asset-based approach is most applicable when the intended level of value is a marketable, controlling ownership interest level of value. At such a level of value, the entity owner could, in fact, buy or sell all of the assets of the subject entity.

   If the intended level of value is a nonmarketable, noncontrolling level of value, considerable valuation adjustments (i.e., discounts) may be necessary to complete the valuation analysis. And, the analyst may have to consider if a nonmarketable, noncontrolling valuation subject would even have the legal right (or operational ability) to buy or sell all of the assets of the subject entity.

The above discussion summarized many of the instances when an asset-based approach analysis is particularly applicable to the business valuation. Analysts should also realize that there are several caveats related to the development of an asset-based approach analysis.

Some of these analyst caveats include the following:

1. The analyst should be professionally qualified to perform (and explain) all of the procedures required in the development of the asset-based approach. The analyst should be competent to perform all of the asset valuation and all of the liability valuation analyses required to develop the AA method.

   And, the analyst should be competent to perform all of the valuation analyses required to measure intangible value in the nature of goodwill (whether positive or negative) in the ANAV method.

   Analysts sometimes rely on third-party specialists to value certain property categories. However, the analyst concluding the overall business value should be able to explain the work of the third-party specialist. It may not be sufficient for the analyst to naively state "I relied on the third-party specialist" to value an important property category in the asset-based approach analysis.
2. The analyst should understand the standard of value that is applied in the analysis of each asset category. The analyst should be careful to ensure that all asset categories are valued to a consistent standard of value.

   And, the analyst should be careful to ensure that the standard of value applied to all of the asset categories is the same standard of value appropriate to the overall business valuation assignment.
3. The analyst should understand the premise of value that is applied in the analysis of each asset category. The analyst should be careful to ensure that all asset categories are valued to a consistent premise of value. And, the analyst should be careful that the premise of value applied to all of the asset categories is the same premise of value appropriate to the overall business valuation assignment.

   The analyst should understand that different applications of the asset-based approach could conclude either a going-concern premise of value or a liquidation premise of value.
4. The analyst should be professionally competent to understand (and explain) all of the income tax considerations related to

the asset-based approach analysis. The analyst may need to consult a third-party tax specialist to revalue deferred tax asset and liability accounts and to recalculate any income tax liability related to the asset revaluation process.

5. The analyst should be professionally competent to perform (and explain) the valuation of the subject entity liability accounts (both long-term debts and contingent liabilities) related to the asset-based approach analysis. The analyst should consider that there may be liability accounts (including tax liability accounts) that are created as a result of the application of the asset-based approach.

6. The analyst should be professionally competent to quantify (and explain) any valuation discounts that should be applied in the asset-based approach analysis. These discounts may include both entity-level discounts (e.g., key employee dependence, key customer dependence) and security-level discounts (e.g., DLOC, DLOM).

   And, the analyst should understand that the magnitude of the security-level discounts may be different for an asset-based approach analysis than for an income approach or a market approach analysis.

7. The analyst should consider that the asset-based approach typically concludes a marketable, controlling ownership interest level of value. The analyst should consider if that approach is applicable (even with the application of valuation discounts) to estimate a nonmarketable, noncontrolling level of value within the context of a particular valuation assignment.

8. The analyst should understand that an asset-based approach analysis is based on the principle that either (a) the business owner/operator will buy (recreate) all of the subject entity assets or (b) the business owner/operator will sell (liquidate) all of the subject entity assets.

   The analyst should consider whether either principle is appropriate within the context of the particular valuation assignment. That is, the analyst should consider if there are legal, contractual, regulatory, or other issues that would prohibit the business owner/operator from either buying (recreating) or selling (liquidating) all of the subject entity assets.

Going-Concern Valuations versus Liquidation Valuations

As mentioned above, the asset-based approach can conclude a going-concern value or a liquidation value. In other words, the asset-based approach can conclude a value in continued use or a value in exchange.

And, within the value in exchange (or liquidation) premise of value, the asset-based approach can conclude either an orderly disposition (or sale) of the entity assets or a forced disposition (or sale) of the entity assets.

That is, the analysis can assume that the entity assets are sold individually but with either:

1. a normal marketing exposure to the most efficient secondary market or
2. a less than normal marketing exposure to a fast sale secondary market.

Which premise of value the analysis concludes is not a function of the analyst's intention. And, the concluded premise of value is not based on the analyst's (or the client's) assumption. In other words, legal counsel (and other parties that rely on business valuations) often believe: the analyst performed an asset-based approach valuation of the subject entity; therefore, let's just assume that the analysis conclusion is a going-concern value indication. That belief is unsupported.

Again, the premise of value concluded by the asset-based approach is not based simply on the analyst's (or the counsel's) assumption. Rather, the premise of value concluded by the asset-based approach is influenced by:

1. the selection of the valuation approaches and methods applied to value the entity's individual asset categories and individual liability categories and
2. the selection of the specific valuation variables and valuation procedures applied (within the selected approaches and methods) to value the entity's individual asset categories and individual liability categories.

This valuation principle seems elusive to many analysts and to legal counsel. However, this valuation principle could not be more straightforward.

If the analyst applies approaches, methods, and procedures that conclude the going-concern value for each asset category, then the asset-based approach analysis will conclude a going-concern value for the subject entity.

If the analyst applies approaches, methods, and procedures that conclude the liquidation value of each asset category, then the asset-based approach analysis will conclude a liquidation value for the subject entity.

The confusion related to the above basic principle may be caused by the fact that most business valuation analysts (and most legal counsel) are not property valuation analysts. The business valuation analysts (and legal counsel) often rely on the work of third-party valuation specialists to conclude the value of the subject entity's inventory, real estate, machinery and equipment, intellectual property, and so on.

The property appraiser's report may conclude fair market value or market value or some other stated standard of value. The business valuation analyst (and legal counsel) may have seen a standard of value definition that included words like "willing buyer and willing seller" and "market participant." And, the analyst (and counsel) just assumed that the property appraisal conclusion was a going-concern value indication.

The analyst (and the counsel) did not investigate the property appraiser's assumptions regarding how the "willing buyer and willing seller" or the "market participants" would get together and transact the sale of the subject asset category. Would all of the subject entity's assets be sold at the same time, say as part of a business merger or acquisition?

That transactional premise seems unlikely if the property appraiser was tasked with appraising one asset category (say real estate) only. Would all of the subject entity's assets be sold piecemeal, with each property category sold individually at its highest price after its own market exposure period? Would all of the subject entity's assets be sold, but in a transaction where all of the property categories have to be sold at the same time?

All of the above transactional scenarios could involve "a willing buyer" and "a willing seller" for each property category. However, each set of transactional assumptions would conclude a different value for the same property category. And some of these "market value" conclusions could be considered going-concern premise of value indications and some of these conclusions could be considered liquidation premise of value indications.

Experienced property appraisers appreciate the subtle (but quantitatively significant) difference between these premise of value transactional assumptions. Even experienced business valuation analysts (and legal counsel) may not appreciate these property appraisal subtleties. Therefore, the valuation analyst (and the legal counsel) should not assume that the asset-based approach analysis concludes the intended level of value.

When the Asset-Based Approach Concludes a Going-Concern Value

Of course, the asset-based approach concludes a going-concern business value when the property valuation approaches applied conclude a going-concern value for each of the entity's asset categories.

So, the primary issues in the application of the asset-based approach are as follows:

1. Which property valuation approaches and methods conclude a going-concern value for each asset category?
2. Which property valuation approaches and methods conclude a liquidation value for each asset category?

Generally, the application of cost approach property valuation methods indicates a going-concern value for the subject asset categories.

Generally, the application of market approach property valuation methods indicates a liquidation value for the subject asset categories.

And, generally, the application of income approach property valuation methods may indicate either a going-concern value or a liquidation value for the subject asset categories. Accordingly, the selection of the individual valuation variables will determine whether the income approach indicates going-concern value or a liquidation value.

Accordingly, the remainder of this section of the discussion will focus on the application of the cost approach and the income approach within the context of developing asset-based approach a going-concern value indications.

The property valuation cost approach is based on the economic principle of substitution. That is, the value of an individual property is influenced by the cost required to obtain a substitute property. From a business buyer's perspective, a buyer is faced with a make versus buy decision. That is, the buyer will not pay more to buy an asset category than the amount of cost that would be required for the buyer to make (i.e., recreate) that asset category.

The seller looks at the valuation problem from an opposite, but similar, perspective. The business seller would not sell the subject asset for a price less than the amount of cost that the buyer would have to spend to make (i.e., recreate) that asset.

"[A]ll cost approach analyses should consider the various components of depreciation and obsolescence required to convert the cost metric into a value metric."

There are various cost components (e.g., direct costs, indirect costs) that are included in a cost approach analysis. There are various cost metrics (e.g., replacement cost new, reproduction cost new) that may be measured in a cost approach analysis. And, all cost approach analyses should consider the various components of depreciation and obsolescence required to convert the cost metric into a value metric.

From the business owner/operator's perspective, all cost approach analyses answer pretty much the same question. If my business entity did not already own all of its component assets, how much would it cost to replace all of the entity's asset categories? That cost approach analysis would include all of the costs required to get the replacement asset in place and ready to operate.

That is, the cost approach analysis quantifies the amount of cost required to reassemble a going-concern bundle of fully operational assets. Considered another way, the cost approach measures the amount of cost required to reassemble the income-producing capacity of the entity's current bundle of operating assets.

Accordingly, the cost approach indicates a going-concern value for the entity's assets. In the cost approach, the business owner is not trying to sell off the entity's assets. In contrast, the business owner is trying to buy (i.e., reassemble) all of the entity's assets. The cost approach analysis answers the question: how much would it cost to assemble all of the subject entity's assets in place, ready to operate, and ready to generate income?

Therefore, the cost approach to property valuation does not consider any value reductions for sale make-ready expenses, sale holding period expenses, sale commission expenses, or income taxes related to the property sale. That is because the current business is not selling any of its property. Rather, theoretically, the current business is buying (i.e., replacing) all of its property. And, there are no selling expenses incurred—or income taxes due—when a business buys property.

In an asset-based approach business valuation analysis, the cost approach may be particularly applicable in the valuation of either fungible tangible assets or contributory (sometimes considered "back room") intangible assets. For example, the cost approach is often used to conclude the going-concern value of an entity's inventory, real estate, and machinery and equipment. And, the cost approach is often used to conclude the going-concern value of an entity's computer software, proprietary formulas and technical documentation, databases, customer lists and other trade secrets, and assembled workforce.

The property valuation income approach is based on the economic principle of expectation. That is, the value of the individual property is influenced by the present value of the future income that can be earned from the operation of that property.

The determination of whether the income approach indicates a going-concern value or a liquidation value depends on the answer to the question: who is the assumed owner of the subject property?

The property valuation income approach is based on the present value of the future income generated from the operation of the subject property or asset category. That income projection is present valued at a risk-adjusted present value discount rate.

The important valuation variables included in the income approach analysis include the following:

1. The amount of the income projection
2. The term of the income projection
3. The present value discount rate

The individual variables considered in the amount of the income projection include the following:

1. The level of (and growth rate of) revenue associated with the property
2. The level of (and margin of) profitability associated with the property
3. The amount of any investment (e.g., working capital, capital expenditures) required to support the income projection
4. The level (and rate) of income taxes associated with the income projection

The individual variables considered in the term of the income projection include the following:

1. The remaining useful economic life ("UEL") of the property
2. The shape and slope (usually, the decay rate) of the UEL curve

The individual variables considered in the discount rate (or in the direct capitalization rate) analysis include the following:

1. The subject property cost of capital components
2. The possibility of a residual value or a terminal value period
3. Any income growth rate (positive or negative) in that residual value

In selecting each one of the above-listed income approach variables, the analyst (implicitly or explicitly) makes the following decision:

1. Do I select the valuation variables that are appropriate to the current business owner/operator—that is, variables that assume a continuation of the current ongoing business operations? or
2. Do I select valuation variables that are appropriate to the typical (or specific) market participant, meaning the next business owner/operator—that is, variables that assume a change of ownership and a change of operation due to a sale of the subject business entity?

So, if the analyst selects the first above-listed option (i.e., valuation variables based on the current owner/operator), the income approach analysis will indicate a going-concern value for the subject property. This analysis will indicate the value in continued use of the property category—as part of the current going-concern business operations.

If the analyst selects the second above-listed option (i.e., valuation variables based on the next market participant owner/operator), then the income approach will indicate a liquidation value for the subject property. This value should not be construed as a forced or an involuntary liquidation value.

Rather, this value simply assumes that the subject property is sold separately from the rest of the subject entity asset categories. The other business assets are left behind (or, likely, sold separately in an orderly disposition), but the subject property is sold to a new buyer. This analysis will indicate the value in exchange of the property category—that is, the value to the new buyer—but not the value as part of the current ongoing business operation.

In performing the income approach property valuation, the analyst could select growth rates, profit margins, income tax rates, UEL curves, discount rates, and direct capitalization rates that would be appropriate to the subject business entity. The application of such selected valuation variables would produce a going-concern value indication.

Such an analysis would indicate the value of the subject asset category as part of the subject going-concern business entity. That value would measure the contribution of the individual asset category to the current business entity. The asset category continues to be owned by the subject entity. If there is an assumed sale transaction, the entire business enterprise would sell as one collective unit of operating assets.

In performing such a property valuation, the analyst does not have to consider holding period expenses, make-ready expenses, sales commission, or capital gains taxes. The individual property is not sold separately, so these sale-related expenses are not incurred and these sale-related liabilities are not created.

In an asset-based approach analysis, the income approach may be particularly applicable to tangible assets or intangible assets that directly generate a measurable income stream. Such tangible asset examples may include income-producing or rental property real estate, such as hotel, commercial

office buildings, and residential apartment complexes. Such intangible asset examples may include customer relationships, franchises, licenses, trademarks, copyrights, and development or commercialization agreements.

Goodwill and Economic Obsolescence

In the going-concern application of the asset-based approach, analysts typically apply an income approach analysis to value at least one intangible asset.

In the AA method, analysts typically use a multiperiod excess earnings method ("MEEM") analysis or a CEEM analysis to identify and value any residual goodwill.

In the ANAV method, analysts typically use the CEEM analysis to collectively value all of the entity's intangible value in the nature of goodwill.

The use of at least one income approach analysis is an important procedure in the going-concern application of the asset-based approach. This procedure quantifies any residual intangible business value owned by the subject entity after appropriate value components have been assigned to all other tangible assets and identifiable intangible assets.

This procedure is intended to prove that the value of the subject entity is at least equal to the value of the sum of its parts. That is, the value of the business entity is equal to (or greater than) the sum of the individual values of the component tangible assets and identifiable intangible assets.

This additional value is measured as the present value of any excess income not attributable to the entity's tangible assets and identifiable intangible assets. The present value of this excess income is usually referred to as goodwill.

The other reason why analysts typically apply an income approach analysis to at least one intangible asset is because such a procedure is a test for economic obsolescence. This procedure is applicable when the analyst applies a MEEM to value, say, a franchise, a license, or customer relationships. And, this procedure is applicable when the analyst applies a CEEM to measure intangible value in the nature of goodwill.

The point is that either the MEEM analysis or the CEEM analysis sometimes indicates that there are no excess earnings being generated at the subject entity. In fact, there may be an income loss being generated at the subject entity. From a valuation perspective, an income loss occurs when the entity earns an amount of income that is less than a fair rate of return on the value of its tangible assets and identifiable intangible assets.

If the entity is earning an income loss based on the estimated value of its assets, then the analyst capitalizes this income loss. This procedure is called the capitalization of income loss method ("CILM"), and it is a generally accepted method to measure economic obsolescence within a cost approach property appraisal.

The CILM estimate of economic obsolescence is sometimes thought of as negative goodwill. However, since an entity cannot record a negative goodwill balance, the analyst will decrease the indicated value of the entity's other assets—until the negative goodwill is eliminated.

That is, the analyst adjusts the value of all entity assets valued using the cost approach for this amount of economic obsolescence. This adjustment would apply to all asset categories valued by reference to the cost approach—both tangible assets and identifiable intangible assets.

When the value of these assets is decreased, the amount of income needed to provide a fair rate of return on those assets is also decreased. When the value of the cost approach assets is sufficiently decreased by this recognition of economic obsolescence, the income loss is reduced to zero. At that point, the entity experiences no excess earnings, but the subject entity experiences no income loss either. There is no positive goodwill value to recognize, but there is no negative goodwill indication either.

Therefore, the application of an income approach method (say a MEEM or a CEEM) is an important procedure for two reasons:

1. It identifies and quantifies any positive intangible value associated with any excess income (that is not associated with any other tangible asset or identifiable intangible asset).
2. It identifies and quantifies any economic obsolescence. Such an economic obsolescence indication indicates that an adjustment is needed to the appraised value of the entity's other assets—in order to avoid overstating the net asset value of the subject business entity.

When the Asset-Based Approach Concludes a Liquidation Value

Of course, the asset-based approach concludes a liquidation business value when the property valuation

approaches applied conclude a liquidation value for each of the entity's asset categories.

Generally, the application of market approach property valuation methods indicates a liquidation value for the subject asset categories.

Depending on the individual valuation variables applied, the income approach property valuation methods indicate a liquidation value for the subject asset categories. This premise of value is concluded when the selected valuation variables relate to how the next property owner will operate the subject asset category. So, the analyst may select projected growth rates, UEL curves, revenue levels, expense levels, profit levels, investment levels, discount rates, and direct capitalization rates that relate to a "market participant" next owner.

Such valuation variables will indicate a liquidation value for the subject tangible asset or subject intangible asset. In contrast, the analyst may select valuation variables that reflect how the current owner/operator will operate the property. Such valuation variables will indicate a going-concern value for the subject tangible asset or subject intangible asset.

As described above, the market approach or the income approach will conclude the price the current owner/operator business entity will receive when it sells the asset category to a new owner/operator business entity. Again, within the asset-based approach context, the term liquidation valuation premise should not imply either a forced liquidation sale or an involuntary sale.

Rather, this valuation premise assumes that each asset category (or bundle of assets) is sold separately—in an orderly disposition and with a normal exposure period to the market—in order to maximize the sale price. The asset category may be (and likely will be) sold between one going-concern business entity and another going-concern business entity.

However, this valuation premise assumes that the asset categories are sold separately from each other. This valuation premise does not necessarily assume that the entire subject business enterprise is sold, as one collective bundle of properties, in either a public stock offering or a merger and acquisition transaction.

Since the market approach and the market-participant-based income approach assumes an asset sale, the analyst has to consider that same process in the asset category valuation.

For example, the analyst should consider the following factors when estimating the value contribution of the asset category sale to the subject entity:

1. The timing of the asset sale; will it occur immediately? in six months? in two years?
2. Any contractual, legal, or other restrictions associated with the timing of (or the ability to complete) the asset sale
3. Any holding period expenses during the market exposure period; these expense categories may include interest expense, insurance expense, property tax expense
4. Any make-ready costs to get the asset category ready for sale; these expense categories may include R&D expense, deferred maintenance expense, capital expenditures
5. Any sale-related expenses; these expense categories may include legal fees, brokerage fees, sales commissions
6. Any tax-related expenses; these expense categories may include capital gains taxes—that are either payable at the time of the sale or deferred to a future time period

In the liquidation premise of the asset-based approach, the analysis ultimately measures the contribution of the entity's cash balance related to the sale of the entity's asset categories. Of course, the asset selling price is the amount the buyer would pay to the seller for that property category. However, the value contribution to the asset-based approach business valuation is the asset selling price—less any expenses incurred or liabilities created as a result of the property sale.

In other words, the value contribution of the property category sale to the business entity is the amount of the net proceeds available for distribution to the business entity owners.

This issue illustrates an important quantitative difference between the going-concern-based asset-based approach and the liquidation-based asset-based approach.

The going-concern analysis applies the cost approach or an owner/operator income approach to value the subject entity asset categories. In this asset-based approach analysis, the subject entity buys or recreates all of its asset categories. There are no asset selling expenses or related liabilities. This is because there are no asset sales.

In contrast, the liquidation analysis applies the market approach or the market participant income approach to value the subject entity asset categories. In this asset-based approach analysis, the subject entity sells all of its asset categories. The analyst has to consider asset selling expenses and liabilities. This is because such expenses will be

> "[T]he selection of which premise of value—and which property valuation approaches and methods—to apply is an important consideration in any asset-based approach business valuation analysis."

incurred and such liabilities will be created when the subject entity assets are sold.

Accordingly, the analyst (and the legal counsel and any other party relying on the valuation) should expect to conclude different value indications from the two different applications of the asset-based approach to business valuation.

Therefore, the selection of which premise of value—and which property valuation approaches and methods—to apply is an important consideration in any asset-based approach business valuation analysis.

The Future Sale of the Entity Assets

In some liquidation premise applications of the asset-based approach, the analyst has to assume a future sale of some (or all) of the subject entity asset categories. This assumption regarding a future (and not a current) sale of subject entity asset categories may be appropriate for several reasons, including the following:

1. The valuation subject is a noncontrolling ownership interest. The ownership interest cannot initiate the sale of any of the subject entity assets. The analyst may have to project when a control event is likely to occur. In other words, the analyst may have to project when the current controlling owner would intend to initiate a control event—and sell the subject entity or the subject entity asset categories.
2. There may be a partnership agreement, a shareholder agreement, and LLC operating agreement, or some other organizational document that restricts the sale of substantially all of the entity assets until some future date (e.g., the expiration of the partnership or LLC).
3. There may be regulatory, legal, contractual, or other restrictions on the sale of substantially all of the entity assets. The analyst may have to assume that the entity asset sale will not occur until the franchise, license, loan agreement, or other restriction expires.
4. There may be a normal period of time required for the subject entity to obtain shareholder, director, regulatory, or other agreements or approvals to sell substantially all of the entity's assets.

If the valuation subject is a nonmarketable, noncontrolling ownership interest, the analyst should seriously consider if the asset-based approach is applicable to the subject assignment. The application of the asset-based approach is based on the premise that the subject interest owner can either buy (recreate) the entity assets or sell (liquidate) the entity assets.

If the subject interest owner cannot influence such a control event—or if such a control event is not reasonably foreseeable—then the application of the asset-based approach may not be supportable.

If such a control event is foreseeable—but not for a lengthy time period, then the analyst will have to adjust the analysis to accommodate that expected delay in the control event.

For example, let's assume that the sale of substantially all of the subject entity assets cannot occur until the controlling partnership agreement expires. If the analyst still elects to apply the asset-based approach, the analyst may have to estimate the selling price of the entity assets at a time period 20 years in the future.

One procedure the analyst could use is to start with a contemporaneous appraisal of the subject entity assets. Then, the analyst could apply a trend factor to represent the net change in the subject asset prices for the prospective 20-year time period. That trend factor could represent the expected compound annual growth rate ("CAGR") or compound annual decline rate ("CADR") in the value of the subject asset category.

Of course, that CAGR (or CADR) should be a "net" trend factor. That is, the selected factor should represent the expected appreciation in the price of the subject asset, net of any expected depreciation in the value of the subject assets.

For example, if the analyst expected a particular asset category price to appreciate at the rate of 5 percent per year but also depreciate at the rate of 2 percent per year, then the analyst may apply a 3 percent "net" CAGR to the current value of the subject assets. In this example, let's say the current value of the subject entity asset category is $10,000,000.

At a 3 percent CAGR, the future value of the asset category at the end of 20 years would be:

Present Value × Future Value Interest Factor = Future Value

$10,000,000 × 1.8061 = $18,061,000

The 1.8061 future value interest factor represents the future value of 1 for 20 years compounded at a 3 percent annual interest rate.

Of course, the above calculation tells the analyst the expected value of the asset category 20 years into the future. The analyst still needs to estimate the value of that asset category today—as of a current valuation date. So the analyst will have to present value the t = 20 years value in order to conclude a value that could be incorporated into a contemporaneous asset-based approach analysis.

Let's assume that the analyst selects a 10 percent present value discount rate as the discount rate applicable to any income approach asset valuations included in the asset-based approach analysis.

In that case, the analyst can calculate the valuation date present value of the subject entity future value using the following calculation:

Future Value × Present Value Interest Factor = Present Value

$18,061,000 × 0.1486 = $2,090,000

The 0.1486 present value interest factor represents the present value of 1 for 20 years discounted at a 10 percent discount rate.

The above calculation tells the analyst that the subject asset category could be sold today for $10,000,000 if, in fact, the subject entity assets could be sold today. If the illustrative subject partnership cannot be terminated for 20 years and the subject ownership interest cannot initiate an asset sale control event, the interest holder will have to wait 20 years to realize the proceeds from the asset sale.

Based on expected value appreciation rates (net of any depreciation), the asset category is expected to sell for $18,061,000 in 20 years. However, the present value of the asset sale proceeds is only $2,090,000 as of the contemporaneous valuation date.

Therefore, in this illustrative example, the analyst would use the $2,090,000 present value as the subject asset category value in the asset-based approach business valuation analysis. Therefore, that asset value would reflect an almost 80 percent price discount—compared to the $10,000,000 expected current sale price of the subject asset category.

That implicit price discount would reflect the impact of the interest holder not being able to sell the entity's asset group for the next 20 years. One way to consider that valuation impact is that this illustrative asset-based approach analysis reflects an implicit DLOC of nearly 80 percent.

And, the above calculation does not yet reflect the impact of any asset selling expenses or any income tax liability associated with the future sale of appreciated property. The asset-based approach consideration of holding period costs and selling expenses is discussed next.

Holding Period Costs and Selling Expenses

When the analyst applies the market approach to value the subject entity assets in an asset-based approach analysis, the analyst will consider holding period costs and make-ready expenses. Such transactional expenses are not a relevant factor if the analyst applies the cost approach to conclude a going-concern value for the subject entity assets.

However, such transactional expenses are a relevant consideration when the analyst applies the market approach to conclude a liquidation value for the subject entity assets.

The category of holding period costs typically include at least two types of expenses:

1. Ownership expenses during the expected sale period – Such ownership expenses may include property maintenance expense, property taxes, property insurance expense, and interest on the property investment.
2. Make-ready expenses – Such expenses may include any expenses necessary to prepare the subject entity asset category for sale at the expected selling price.

The category of selling expenses typically includes at least two types of expenses:

1. Brokerage fees or sales commission – This type of expense is usually paid to an intermediary who arranges for the asset sale.
2. Transfer fees – This type of expense may include transfer taxes, registration fees, and transaction-related legal expenses.

These holding period costs and selling expenses may be subtracted from the expected selling price of

the subject entity asset category. After all, the asset-based approach is based on the net proceeds of the asset category sale to the business entity. Often, the estimated holding period costs and selling expenses are recognized as either a contra asset or a liability in the asset-based approach analysis.

With this form of presentation, any party relying on the valuation can observe both:

1. the expected sale price of the asset category and
2. the expected expenses incurred in order to achieve that asset sale price.

Of course, the subject entity will not incur selling expenses until the asset category is sold. So, if the business assets cannot be sold for 20 years (as in the previous example), the subject entity will not incur the selling expense until 20 years into the future.

Of course, that same entity would have to incur 20 years of holding period costs (e.g., insurance, interest, property tax) until the subject assets are sold.

Income Tax Liability

When the analyst applies the market approach to value the subject entity assets in an asset-based approach analysis, the analyst will consider any income tax expense or liability (i.e., deferred expense) that is created as a result of the asset sale. Such an income tax liability is not a relevant factor if the analyst applies the cost approach to conclude a going-concern value for the subject entity assets.

However, such a transactionally created liability is a relevant consideration when the analyst applies the market approach to conclude a liquidation value for the subject entity assets.

In order to estimate the income tax liability associated with the asset category sale, the analyst will need to know the following:

1. The expected asset selling price
2. The current owner's income tax basis for the asset
3. Whether the current owner has claimed a depreciation or amortization income tax deduction related to the subject asset

If the expected selling price is greater than the tax basis of the asset, there will be a taxable gain associated with the asset sale. Normally that gain would be recognized by the subject entity seller as a capital gain. If the subject entity has claimed either a depreciation or amortization deduction associated with the asset, that portion of the gain on the sale will be recognized as ordinary income—instead of as a capital gain.

Technically, that portion of the gain will be recognized as the recapture of the previously claimed depreciation or amortization expense deduction Any gain above the amount of the depreciation or amortization recapture will be recognized as a capital gain.

Of course, there are no transaction-related income tax consequences until there is an asset sale transaction. So if the asset-based approach analysis considers a future asset sale (say, due to a contractual restriction), then the income tax liability will also be created in the future.

However, absent contractual, legal, or other restrictions on asset sales, the market approach analysis assumes that the subject assets are sold fairly quickly—based on a reasonable exposure to their appropriate secondary market.

That is, the cost approach typically assumes that the subject entity assets are bought right away. And, the market approach typically assumes that the subject entity assets are sold right away. So, in the market approach application of the asset-based business valuation approach, the income tax liability is also created right away.

Absent shareholder agreement or other contractual restrictions (or level of value considerations), the intention of the actual business owners (to sell or not to sell) does not impact the amount of the income tax liability.

The asset-based approach typically contemplates a business sale transaction between a typical buyer and a typical seller—and ignores the intention of the current business owner/operator.

Illustrative Example of a Going-Concern Valuation

This section presents a simplified application of the asset-based approach to business valuation. Let's assume that the analyst is retained to estimate the value of the Alpha Corporation ("Alpha") as of June 30, 2018. To simplify the example, let's assume that the valuation objective is a marketable, controlling ownership interest in 100 percent of the common stock of Alpha. And, let's assume that Alpha only has one class of equity outstanding.

Considering the level of value that is the subject of the assignment, the analyst decided to apply the

asset-based approach as one of the business valuation approaches developed in the analysis.

In this example, the analyst decided to apply the cost approach to value most of the Alpha individual asset categories. That decision may have been influenced by the quantity and quality of available data or by other considerations. Nonetheless, the analyst understands that the inclusion of cost approach value indications for each asset category will conclude a going-concern premise of value for the Alpha business entity.

To ensure that the analysis encompasses all of the entity's intangible value in the nature of goodwill—and to test for the existence of any economic obsolescence—the analyst will apply the CEEM as the last component of the asset-based approach business valuation.

In a consolidated format (for illustrative purposes), the Alpha GAAP-based balance sheet is presented in Exhibit 1. Since this balance sheet is prepared in compliance with U.S. GAAP, the account balances are presented on a historical cost basis.

Based on the availability of and access to data, and based on the cooperation provided by Alpha management, the analyst could perform the AA method. That is, the analyst had the ability (and the time and the budget) to individually value each Alpha asset category. Alternatively, the analyst could have performed the ANAV method to collectively revalue all of the Alpha net assets.

As part of the valuation process, the analyst considered the Alpha current asset accounts. The analyst concluded that the accounting balances of the company's cash, inventory, and receivable accounts fairly reflected the current values for these asset categories.

The analyst relied on third-party specialists to appraise the Alpha real estate and tangible personal property. The analyst worked with both the real estate appraiser and the equipment appraiser in order to:

1. understand their asset appraisal procedures and
2. ensure that those procedures were consistent with the analyst's overall business valuation process.

Both the real estate appraiser and the equipment appraiser applied the cost approach and, specifically, the replacement cost new less depreciation ("RCNLD") method to value their respective asset categories.

The real estate appraiser concluded that the current value of the Alpha real estate is $50 million. And, the equipment appraiser concluded that the current value of the Alpha personal property is $30 million.

Both of these current value conclusions reflect the RCNLD for the subject asset categories. The analyst concluded that neither RCNLD analysis included an allowance for property-specific economic obsolescence.

The analyst next identified and valued all of the Alpha intangible assets. The Alpha balance sheet recorded the historical cost of purchased computer software.

The analyst's due diligence investigations revealed that Alpha owns and operates the following intangible asset categories:

1. Computer software, including purchased and internally developed software, software customization during installation, and automated databases (collectively, "software")
2. Proprietary technology, engineering drawings and technical documentation, and other trade secrets documentation (collectively, "technology")

Exhibit 1
Alpha Corporation
Statement of Financial Position
As of June 30, 2018
(in $000s)

Assets		Liabilities and Owners' Equity	
Current Assets	10,000	Current Liabilities	10,000
Plant, Property, and Equipment:		Long-Term Debt:	
Real Estate (at cost)	40,000	Note Payable	20,000
Tangible Personal Property (at cost)	60,000	Mortgage Payable	20,000
Less: Accumulated Depreciation	(40,000)	Total Long-Term Debt	40,000
Plant, Property, and Equipment, Net	60,000		
		Owners' Equity:	
Intangible Assets:		Capital Stock	10,000
Purchased Computer Software (cost less accumulated amortization)	10,000	Retained Earnings	20,000
		Total Owners' Equity	30,000
Total Assets	80,000	Total Liabilities and Owners' Equity	80,000

3. Procedures manuals, safety manuals, training manuals and documentation, employee manuals, and the like (collectively, "documentation")
4. Trademarks, trade names, service marks, service names, and domain names (collectively, "trademarks")
5. A trained and assembled workforce of management and skilled employees (collectively, "workforce")

The analyst could value each of these intangible asset categories independently. To simplify this illustrative example, let's assume that the analyst valued all of these intangible assets collectively. The analyst used the cost approach and the RCNLD method to value all of these intangible asset categories. Before consideration of any economic obsolescence, the analyst concluded an intangible asset current value of $20 million.

Next, the analyst considered the Alpha current liability accounts. The analyst concluded that the account balances for these liabilities represent a fair indication of the current value of these liabilities.

Next, the analyst considered the Alpha long-term liabilities. The analyst concluded that the terms of the note payable were consistent with current market terms, so no valuation adjustment was necessary. The analyst noted a particularly low interest rate in the commercial property mortgage. The analyst concluded that the mortgage holder would allow Alpha to pay off the commercial mortgage for a single payment of $18 million.

As part of the due diligence process, the analyst did not identify any other contingent or other liabilities to be included in the valuation.

The preliminary value indications from the above-mentioned analyses are summarized in Exhibit 2.

Before the asset-based approach analysis is complete, the analyst has to look for either (1) intangible value in the nature of goodwill or (2) the existence of economic obsolescence.

Let's assume that the analyst concluded that a fair rate of return on the Alpha net assets (i.e., total assets minus current liabilities) was 12.5 percent. Let's assume that the analyst calculated the 12.5 percent fair rate of return as the Alpha after-tax weighted average cost of capital ("WACC").

First, let's assume that the analyst concluded that Alpha will generate a normalized level of after-tax operating cash flow of $13.5 million. Based on the above assumptions, the analyst can perform the CEEM analysis presented in Exhibit 3.

The $100 million net asset value in Exhibit 3 represents the $110 million total asset value minus the $10 million current liability value, both from Exhibit 2.

In the above analysis, the analyst assumes a 0 percent annual rate of change in the Alpha excess earnings. Therefore, the Alpha direct capitalization rate equals the Alpha WACC (i.e., 12.5% WACC – 0% long-term growth rate = 12.5% direct capitalization rate).

Based on the above CEEM analysis, the analyst will complete the Alpha asset-based approach business valuation as presented in Exhibit 4.

Second, let's assume that the analyst instead concluded that Alpha will generate a normalized level of after-tax operating cash flow of only $10 million. Based on this revised normalized income assumption, the analyst can now perform the CEEM (or CILM) analysis presented in Exhibit 5.

In the analysis in Exhibit 5, the analyst again assumed that the Alpha direct

Exhibit 2
Alpha Corporation
Asset-Based Approach Business Valuation
Preliminary Value Indication
As of June 30, 2018
(in $000s)

Assets		Liabilities and Owners' Equity	
Current Assets	10,000	Current Liabilities	10,000
Plant, Property, and Equipment:		Long-Term Debt:	
Real Estate	50,000	Note Payable	20,000
Tangible Personal Property	30,000	Mortgage Payable	18,000
Total	80,000	Total Long-Term Debt	38,000
Intangible Assets:		Owners' Equity	62,000
Identifiable Intangible Assets	20,000		
Total Assets	110,000	Total Liabilities and Owners' Equity	110,000

capitalization rate equals the Alpha WACC. This assumption implies a 0 percent change in the expected income loss going forward.

The above CILM analysis indicates an economic obsolescence percentage rate of 20 percent, calculated in Exhibit 6.

Accordingly, based on the 20 percent economic obsolescence percentage, the analyst will have to complete the respective asset category RCNLD valuation analyses as presented in Exhibit 7.

Exhibit 8 presents the analyst's final business value conclusion, based on the application of the asset-based approach. This business value conclusion incorporates the assumed valuation variable related to the recognition of an amount of income loss—and the resulting economic obsolescence.

Exhibit 3
Alpha Corporation
Intangible Value in the Nature of Goodwill
Capitalized Excess Earnings Method
As of June 30, 2018
(in $000s)

	Net Asset Value (from Exhibit 2) (total assets minus current liabilities)	100,000
×	Fair Rate of Return on Net Assets (WACC)	12.5%
=	Fair Return on Net Assets (required level of income)	12,500
	Normalized Operating Cash Flow (actual income)	13,500
–	Fair Return on Net Assets (required level of income)	12,500
=	Excess Income	1,000
÷	Direct Capitalization Rate	12.5%
=	Intangible Value in the Nature of Goodwill	8,000

This value adjustment is due to the assumed combination of (1) $10 million of Alpha normalized operating cash flow and (2) $100 million Alpha net asset value—based on the cost approach valuation of the individual asset categories.

Exhibit 8 reflects the consideration of economic obsolescence in the cost approach valuation of the Alpha individual asset categories. Of course, the conclusion of the CILM analysis indicates that there is no intangible value in the nature of goodwill (based on the $10 million expected operating cash flow level).

In summary, the historical cost (or accounting net book value) of the Alpha total owners' equity was $30 million. The analyst used the asset-based business valuation approach and the cost property valuation approach to value the Alpha equity based on a going-concern premise of value.

In the first scenario (in which Alpha generates excess earnings and has a positive goodwill value), the value of 100 percent of the equity, on a marketable, controlling ownership interest basis, is $70 million.

Exhibit 4
Alpha Corporation
Asset-Based Approach Business Valuation
Final Value Conclusion
As of June 30, 2018
(in $000s)

Assets		Liabilities and Owners' Equity	
Current Assets	10,000	Current Liabilities	10,000
Plant, Property, and Equipment:		Long-Term Debt:	
Real Estate	50,000	Note Payable	20,000
Tangible Personal Property	30,000	Mortgage Payable	18,000
Total	80,000	Total Long-Term Debt	38,000
Intangible Assets:		Owners' Equity	70,000
Identifiable Intangible Assets	20,000		
Intangible Value in Nature of Goodwill	8,000		
Total	28,000		
Total Assets	118,000	Total Liabilities and Owners' Equity	118,000

Exhibit 5
Alpha Corporation
Economic Obsolescence
Capitalization of Income Loss Method
As of June 30, 2018
(in $000s)

	Net Asset Value (from Exhibit 2) (total assets minus current liabilities)	100,000
×	Fair Rate of Return on Net Assets (WACC)	12.5%
=	Fair Return on Net Assets (required level of income)	12,500
	Normalized Operating Cash Flow (actual income)	10,000
–	Fair Return on Net Assets (required level of income)	12,500
=	Income Loss	(2,500)
÷	Direct Capitalization Rate	12.5%
=	Economic Obsolescence (capitalization of income loss)	(20,000)

Exhibit 6
Alpha Corporation
Economic Obsolescence Percentage
As of June 30, 2018
(in $000s)

	Tangible Assets and Intangible Assets Valued by Application of the Cost Approach—RCNLD Indication (from Exhibit 2)	100,000
÷	Amount of Economic Obsolescence (from Exhibit 5)	(20,000)
=	Indicated Economic Obsolescence Percentage	20%

Exhibit 7
Alpha Corporation
Application of Economic Obsolescence
to Tangible and Intangible Asset Cost Approach Indications
As of June 30, 2018
(in $000s)

Asset Category	Cost Approach Value Indication (before economic obsolescence)	Less: Economic Obsolescence Percentage	Final Cost Approach Value Indication after Economic Obsolescence Allowance
Plant, Property, and Equipment:			
Real Estate	50,000	20%	40,000
Tangible Personal Property	30,000	20%	24,000
Total	80,000		64,000
Intangible Assets:			
Identifiable Intangible Assets	20,000	20%	16,000
Total	20,000		16,000

Exhibit 8
Alpha Corporation
Asset-Based Approach Business Valuation
Final Value Conclusion
As of June 30, 2018
(in $000s)

Assets		Liabilities and Owners' Equity	
Current Assets	10,000	Current Liabilities	10,000
Plant, Property, and Equipment:		Long-Term Debt:	
Real Estate	40,000	Note Payable	20,000
Tangible Personal Property	24,000	Mortgage Payable	18,000
Total	64,000	Total Long-Term Debt	38,000
Intangible Assets:		Owners' Equity	42,000
Identifiable Intangible Assets	16,000		
Total	16,000		
Total Assets	90,000	Total Liabilities and Owners' Equity	90,000

In the second scenario (in which Alpha generates an income loss and experiences economic obsolescence), the value of 100 percent of the equity, on a marketable, controlling ownership interest basis, is $42 million.

Illustrative Example of a Liquidation Valuation

This section presents a second simplified application of the asset-based approach to business valuation. Let's assume that the analyst is retained to value 100 percent of the common stock of a company that is essentially identical to Alpha. Let's call this second company Beta Corporation ("Beta").

Again, the analyst will value 100 percent of the single class of stock on a marketable, controlling ownership interest basis. Again, the analyst decides to use the asset-based approach to business valuation.

Again, the analyst has access to asset-category-specific appraisals, and the analyst has the cooperation of company management. So, the analyst can apply the AA method of the asset-based approach.

The only difference between Beta and the prior example is that the analyst decides to apply the market approach to value the Beta asset categories.

Therefore, this application of the asset-based approach will conclude a liquidation—or value in exchange—premise of value for Beta.

Again, as described above, the use of the market approach does not imply either a forced liquidation or an involuntary liquidation scenario. It simply implies a transactional scenario—between a willing buyer and a willing seller—where each Beta asset category is sold individually.

But each asset category will be sold to a buyer who will operate those assets within its going-concern business enterprise. And, each asset category will be sold after a normal exposure to its most beneficial secondary marketplace—in order to achieve the highest price possible for that asset category.

To have a direct comparison between the alternative asset-based approach applications, let's assume that the Beta historical cost, GAAP-based balance sheet is exactly the same as the Alpha historical cost balance sheet. That is, the Beta starting balance sheet looks exactly like Exhibit 1.

Again, the analyst started the valuation process by considering the Beta current asset accounts. Let's again assume that no revaluation procedures are necessary to the Beta current assets.

In this application of the asset-based approach, the analyst relied on third-party specialists to appraise the Beta real estate and the Beta equipment. This time, in consultation with the analyst, the real estate appraiser applied the market approach to value the Beta commercial real estate. And, in consultation with the analyst, the equipment appraiser applied the market approach to value the Beta tangible personal property.

The real estate appraiser concluded a value of $60 million. And, the equipment appraiser concluded a value of $35 million.

The analyst identified the same categories of Beta intangible assets as was described in the Alpha analysis. The analyst concluded that some of the intangible asset categories have little value when analyzed by reference to the market approach.

For example, competitors with their own documentation or workforce would pay a low value to acquire these Beta intangible asset categories. And, since the asset category buyers will have to generate their own future income, these buyers may pay little or no price for any Beta intangible value in the nature of goodwill.

Based on a market approach analysis of each intangible asset category, the analyst concluded a $10 million total value for all of the Beta identifiable intangible assets.

The analyst considered the Beta current liability accounts. The analyst concluded that the recorded account balances fairly reflect the current values of these liabilities.

The analyst considered the Beta note payable and the Beta mortgage payable. The analyst decided not to adjust the recorded balance of the note payable. And, the analyst decided to revalue the mortgage payable (based on the difference between the embedded interest rate and the current market interest rate) to $18 million.

Finally, the analyst had to consider any liabilities that would be created as part of the asset sale price. The analyst identified two such types of liabilities. First, the analyst had to recognize the accrued expense related to the holding period costs and the sale commissions on the property sales. Second, the analyst had to recognize the income tax liability related to the property sales.

Regarding accrued expenses, the analyst considered the following:

1. Make-ready maintenance expenses
2. Interest, insurance, and property tax during the sale period
3. Brokerage and other sale commissions

And, the analyst had to consider the sale of the Beta (1) real estate, (2) equipment, and (3) identifiable intangible assets. The analyst concluded that, in total, such accrued expenses would be approximately 10 percent of the selling price for each Beta asset category. The analyst quantified this accrued expense liability as presented in Exhibit 9.

Finally, the analyst had to quantify the capital gains tax liability related to the sale of each Beta asset category. Let's assume the analysis is based on the asset category tax basis data presented in Exhibit 10.

Exhibit 10 presents the amount of accumulated depreciation that may result in the recognition of ordinary income (related to the depreciation expense deduction recapture), depending on the current values assigned to each Beta asset category.

Assuming a simplified capital gain tax rate of 20 percent and an ordinary income tax rate of 35 percent (associated with the amount of depreciation expense recapture), let's assume the analyst quantified the income tax liability created from the asset-based valuation presented in Exhibit 11.

Exhibit 9
Beta Corporation
Accrued Expense Liability Analysis
As of June 30, 2018
(in $000s)

	Real Estate Expected Selling Price	60,000
	Equipment Expected Selling Price	35,000
	Intangible Asset Expected Selling Price	10,000
	Total Expected Asset Selling Price	105,000
×	Holding Period and Sales Expense Percent	10%
=	Asset-Sale-Related Accrued Expense Liability	10,500

Exhibit 10
Alpha Corporation
Income Tax Basis of Assets
As of June 30, 2018
(in $000s)

Asset Category	Original Cost	Income Tax Basis	Accumulated Depreciation Claimed
Real Estate	40,000	30,000	10,000
Tangible Personal Property	60,000	30,000	30,000
Intangible Asset (software)	20,000	10,000	10,000

Exhibit 11
Beta Corporation
Income Tax Liability
As of June 30, 2018
(in $000s)

Asset Category	(A) Selling Price	(B) Income Tax Basis	(C=A–B) Total Gain on Asset Sale	(D) Depreciation Expense Deduction Recapture (from Ex. 10)	(E) Income Tax Rate	(F=D×E) Ordinary Income Tax Liability	(G=C–F) Remaining Capital Gain	(H) Capital Gain Tax Rate	(I=H×G) Capital Gain Tax Liability	(J=F+I) Total Tax Liability
Real Estate	60,000	30,000	30,000	10,000	35%	3,500	20,000	20%	4,000	7,500
Tangible Personal Property	35,000	30,000	5,000	5,000	35%	1,750	0	20%	0	1,750
Intangible Assets	10,000	10,000	0	0	35%	0	0	20%	0	0
Total										9,250
Rounded										9,300

Accordingly, the analyst included a $10.5 million accrued expense liability and a $9.3 million (rounded) income tax liability in the asset-based approach valuation analysis. As part of the due diligence process, the analyst did not identify any contingent or other liabilities as part of the valuation.

Based on all of the asset and liability valuation procedures summarized above, the analyst developed the asset-based approach business valuation presented in Exhibit 12.

In summary, the historical cost (or accounting net book value) of the Beta total owners' equity was $30 million. The analyst used the asset-based business valuation approach and the market property valuation approach to value the Beta equity based on a liquidation premise of value.

After adjusting all of the Beta asset and liability accounts to a current value (and after considering the accrued expenses and tax liability related to the Beta asset category sales), the value of 100 percent of the equity, on a marketable, controlling ownership interest basis, is $47.2 million.

Summary and Conclusion

The asset-based approach is a generally accepted business valuation approach. The asset-based approach may be used to value closely held business, business ownership interests, and securities for transaction, taxation, accounting, strategic planning, and litigation purposes.

That said, many analysts (and legal counsel and other parties who rely on business valuations) are not particularly familiar with the application of the asset-based approach to business valuation.

Although it is more commonly used to value asset-holding companies, the asset-based approach can be applied to value operating companies as well. There are several generally accepted asset-based approach valuation methods. The most common methods are the asset accumulation method and the adjusted net asset value method.

However, all asset-based approach methods conclude a marketable, controlling ownership interest level of value. If the valuation subject is a nonmarketable, noncontrolling ownership interest, the asset-based approach may not be the most applicable business valuation approach.

If the analyst decides to apply the asset-based approach to conclude a nonmarketable, noncontrolling level of value, the analyst has to apply appropriate DLOM and DLOC adjustments. And, the analyst should understand that the level of such adjustments may be different for the asset-based approach

Exhibit 12
Beta Corporation
Asset-Based Approach Business Valuation
Final Value Conclusion
As of June 30, 2018
(in $000s)

Assets		Liabilities and Owners' Equity	
Current Assets	10,000	Current Liabilities	10,000
Plant, Property, and Equipment:		Long-Term Debt:	
Real Estate	60,000	Note Payable	20,000
Tangible Personal Property	35,000	Mortgage Payable	18,000
Total	95,000	Total Long-Term Debt	38,000
Intangible Assets:		Transaction-Related Liabilities:	
Identifiable Intangible Assets	10,000	Accrued Expenses	10,500
Total	10,000	Income Taxes Payable	9,300
		Total	19,800
		Total Owners' Equity	47,200
Total Assets	115,000	Total Liabilities and Owners' Equity	115,000

analysis than for the income approach or the market approach.

Common questions arise when analysts develop asset-based approach business valuations. These questions include the following:

1. Does the value conclusion indicate a going-concern value or a liquidation value?
2. When and how should the analyst incorporate goodwill measurements into the valuation?
3. How should income tax liabilities be incorporated into the analysis?
4. How should the analysis consider the scenario where the subject entity) or subject ownership interest) cannot sell the entity asset categories—due to regulatory, legal, contractual, or other restrictions?
5. Which property valuation approach or approaches are most applicable to an asset-based approach business valuation?

This discussion considered the above common issues with regard to the application of the asset-based approach. As discussed above, the answer to many of the common analyst questions depends on which property valuation approaches, methods, and procedures are used to value the subject entity asset categories.

Therefore, analysts who are not familiar with the mechanics of the property valuation approaches and methods may not be qualified to develop asset-based approach business valuations.

One simple litmus test is: the analyst should be able to explain (and defend) all of the differences between the asset-based business valuation approach and the cost property valuation approach.

Just about every business enterprise is either a tangible-asset-intensive entity or an intangible-asset-intensive entity. Therefore, the asset-based approach is applicable to value just about any business enterprise.

The asset-based approach may be used as the primary business valuation approach, as one of two or three business valuation approaches, or as a confirmatory analysis—to test the reasonableness of income approach or market approach value indications.

But, in all of these scenarios, the analyst should be sufficiently familiar with the asset-based approach practical application procedures in order to develop (and to understand and defend) a supportable business value conclusion.

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