CONSTRUCTION COMPANY VALUATION

THE ASSET ACCUMULATION METHOD

This article summarizes the conceptual basis for the AA method.

ROBERT F. REILLY

Valuation analysts (analysts) are often called on to value closely held construction companies for a variety of transaction pricing and structuring, taxation planning and compliance, financing collateral, financial accounting, bankruptcy and reorganization, and litigation support/dispute resolution purposes. Professional analysts consider and apply three generally accepted business approaches to these construction company valuations. These three approaches are really categories of related business valuation methods. The three generally accepted business valuation approaches are called the income approach, the market approach, and the asset-based approach.

A previous issue of Construction Accounting and Taxation presented an article that described the general principles of the asset-based business valuation approach. That article also described how that valuation approach is particularly applicable to construction company valuations performed for transaction, taxation, controversy, and other purposes.

This follow-up article describes and illustrates one of the two common asset-based approach valuation methods: the asset accumulation (AA) method. A third article in this three-part series will describe and illustrate the other common asset-based approach valuation method: the adjusted net asset value (ANAV) method. The AA method and the ANAV method are both generally accepted business valuation methods of the asset-based approach.

The asset accumulation method

The AA method is well suited for construction company valuations performed for a variety of purposes. All business val-

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valuation approaches and methods can indicate the defined value of the subject construction company. In addition, the AA method helps to explain that indicated company value by specifically identifying the value impact of each category of the construction company assets and liabilities. This informational content of the AA method is particularly useful when the construction company valuation is used to identify:

1. which asset categories are contributing how much value to the total company value;
2. which asset accounts serve as the collateral for each secured creditor;
3. which asset accounts are available to serve as collateral for future secured financing;
4. which asset accounts are available to be sold off from the business company core operations;
5. which asset accounts are available to enter into either a lease or a license transaction;
6. what would be the asset revaluation-related income tax consequences of alternative transaction structures for the sale of the subject entity;
7. what the opening balance sheet would look like to the acquirer after the sale of the subject entity;
8. what the value of the subject company would be under various premise of value scenarios, such as a going-concern valuation versus an orderly liquidation valuation;
9. what are the values of the individual asset categories contributed by individual investors in the formation of a joint venture or LLP (or LLC); and
10. what was the amount of the damage suffered by the individual asset categories of a company that experienced a tort, a breach of contract, or some other damage-causing event.

Asset accumulation method procedures

Procedurally, the AA method may be the most difficult business valuation method to perform. Conceptually, the AA method may be the easiest business valuation method to understand.

The first procedure in the AA method is the identification of all of the company’s asset and liability categories. Typically, this procedure starts with the company’s financial accounting balance sheet.

Some analysts prefer to start this valuation procedure with an audited balance sheet. However, this analyst preference is not a requirement to perform the AA method. All of the company’s asset and liability accounts are subject to revaluation to the valuation assignment standard of value (e.g., fair value, fair market value, acquisition value, etc.). Therefore, it is not particularly important whether the analyst starts with an audited, reviewed, compiled, or internally prepared balance sheet. Likewise, it is not particularly important whether the balance sheet is prepared in compliance with U.S. generally accepted accounting principles (GAAP) or international GAAP. Again, the reported asset and liability accounts are going to be restated to the intended standard of value.

It is helpful for the analyst to start with a balance sheet prepared as close as possible to the assignment valuation date. However, this is a convenience and not a requirement. Sometimes, the analyst simply does not have a company balance sheet available at the beginning of the AA method analysis. In that case, the analyst has to start with a blank page and independently identify all of the asset categories and liability categories associated with the subject construction company.

In this first procedure, the analyst identifies all of the company’s assets. This process includes all of the assets that are already recorded on the company’s balance sheet. This process also includes all of the assets that are owned and operated by the company — but that are not recorded on the company’s balance sheet. In particular, most internally created intangible assets will not be recorded on the company’s balance sheet. Therefore, the analyst has to identify and capitalize (which simply means record) these off-balance sheet intangible assets on the revalued company balance sheet.
Also in this first procedure, the analyst identifies all of the company's liabilities. This process includes all of the liabilities that are already recorded on the company's balance sheet. And this process includes all of the liabilities that are either (1) not typically recorded on a balance sheet or (2) created as part of the hypothetical sale transaction. For example, contingent liabilities are not typically recorded on a balance sheet but would be considered in an AA method valuation analysis. Also, income taxes related to the hypothetical asset sale and expenses related to the hypothetical company sale transaction are examples of liabilities that would be created in the valuation process.

The second procedure in the AA method is to value all of the identified asset and liability accounts. The analyst will restate all of the recorded asset and liability accounts to the assignment standard of value. And the analyst will record all of the previously unrecorded assets and liabilities at the assignment standard of value.

The analyst will consider all of the generally accepted property valuation approaches in this procedure. This analysis will include consideration of all cost approach, market approach, and income approach property valuation methods. In particular, the analyst will ensure that the individual asset and liability accounts are restated to the same standard of value — and the same premise of value — as was intended for the overall business valuation assignment.

The third procedure in the method is the mathematical subtraction of the total liabilities value from the total asset value. This subtraction indicates the value of the total equity. Of course, this value indication can be adjusted to conclude the value of the company's invested capital (i.e., long-term debt plus total equity) or to conclude the value of one class of the company's equity (e.g., the voting common stock).

The AA method value conclusion is typically stated as a marketable, controlling ownership interest level of value. To the extent that another level of value is appropriate for the construction company valuation assignment (e.g., a non-marketable, noncontrolling level of value), then the analyst will assess appropriate valuation adjustments. Such adjustments may include a discount for lack of control or a discount for lack of marketability.

The remainder of this discussion focuses on the identification and valuation of the construction company's individual asset and liability accounts.

### Current asset accounts
Current asset accounts typically include cash, marketable securities, prepaid expenses, accounts receivable, materials and supplies, and inventory. First, the analyst performs whatever due diligence procedures are necessary to confirm the existence of these current asset accounts. Second, the analyst restates the asset account balances to a current value as of the assignment valuation date.

For most current asset accounts, the account value does not change materially under alternative standards of value. And for many valuations, the analyst often applies a simplifying assumption: that the recorded current asset account balance is representative of the intended standard of value account balance.

Sometimes, if there are material amounts of accounts receivable or inventory balances, then the analyst may revalue these accounts. When valuing the accounts receivable balance, the analyst may create a contra-asset account (similar to a reserve for uncollectible accounts) to conclude the current value of this asset. In quantifying this reserve (or reduction) account, the analyst will consider the age of the receivables and the collectability of the receivables. The analyst may restate the historical cost of the company's inventory account to a current value as of the valuation date. The current inventory value is often reflected by a replacement cost estimation or a first in, first out inventory accounting convention for the subject asset. In addition to estimating the replacement cost for the inventory, the analyst may consider appropriate contra-asset valuation...
reserves for inventory shrinkage or inventory obsolescence.

**Tangible real and personal property**

This category of assets includes two principal subcategories: (1) real estate and (2) tangible personal property. Real estate typically includes land, land improvements, buildings, and building improvements. Tangible personal property (TPP) includes productive machinery and equipment, tools and dies, computer and office equipment, furniture and fixtures, and vehicles and transportation equipment.

Depending on the age of these assets, there may be a material difference between the historical cost basis asset balances recorded on the company’s balance sheet and the asset current values as of the assignment valuation date. And depending on the experience and expertise of the analyst, the analyst may (1) perform the asset revaluation or (2) rely on property appraisals performed by third-party specialists.

In either case, the value of land and land improvements is often based on the market approach and the sales comparison method. The value of the buildings and building improvements is often based on the cost approach and the replacement cost new less depreciation (RCNLND) method. Buildings and building improvements may also be valued by reference to the market approach if sales of sufficiently comparable properties are available. However, the use of the cost approach is somewhat more common when applying the AA method — particularly if the value in continued use premise of value is appropriate.

The value of the machinery, equipment, and other TPP is typically based on the cost approach and the RCNLND method. The analyst may test the replacement cost new indications by analyzing recent purchases of sufficiently comparable new equipment items. It is unlikely that the analyst will be able to identify sales of sufficiently comparable portfolios of operating assets. For this reason, the market approach is not often used to value TPP in the AA method analysis. It is also uncommon for the analyst to be able to associate a specific income stream with the TPP. For that reason, the income approach is not often used to value TPP in the AA method analysis.

Most of the owned real estate and TPP will be recorded on the company’s balance sheet. Accordingly, the analysis of this asset category is primarily a valuation analysis instead of an identification analysis. The analyst may investigate whether the company operates leased TPP in addition to owned TPP. Such leases may be treated as operating leases under current GAAP. However, for AA method valuation purposes, the analyst may consider capitalizing the value of the company’s leased equipment.

Throughout the valuation analysis of this asset category, the analyst should be mindful to apply a consistent standard of value and a consistent premise of value. And, of course, the asset valuation standard of value and premise of value should be consistent with the standard and premise that is appropriate for the overall construction company valuation assignment.

**Intangible real and personal property**

The intangible real property (IRP) category includes the following types of assets:

1. real property leases;
2. easements and rights of way;
3. air rights, water rights, and surface use rights;
4. mineral, mining, and extraction rights; and
5. building permits and development licenses.

Each of these groups of IRP can be valued using various cost approach, market approach, or income approach property valuation methods.

The intangible personal property (IPP) category includes the following types of assets:

1. customer-related intangible assets (e.g., customer contracts customer relationships);
2. contract-related intangible assets (e.g., licenses and permits, supplier contracts);
3. employee-related intangible assets (e.g., employment agreements, assembled workforce);
4. data processing–related intangible assets (e.g., computer software, automated databases);
5. engineering-related intangible assets (e.g., engineering drawings, product formulations); and
6. intellectual property intangible assets (e.g., patents, copyrights, trademarks).

Each of these examples of IPP can be valued by using various cost approach, market approach, or income approach property valuation methods.

The effort in this part of the analysis is as much about asset identification as it is about asset valuation. Most categories of IRP and IPP are not reported on the company’s balance sheet. Typically, internally created intangible assets are not recorded on a company’s balance sheet.

Therefore, the analyst has to first identify all of the intangible assets that are owned by the construction company. Then, the analyst has to value each of the identified categories of IRP and IPP. Furthermore, the analyst has to consider that the right to use an intangible asset is itself an intangible asset. For example, if a corporate subsidiary has the right to use the parent company’s trademark or computer software or patents, then the subsidiary owns an intangible asset (i.e., the right to use the parent’s intangible asset).

It is common for the analyst to apply different valuation methods to value different categories of intangible assets. For example, computer software, engineering drawings, and the assembled workforce are often valued using the cost approach and the RCNLDM method. Trademarks, patents, and copyrights are often valued using the market approach and the relief from royalty method. And customer relationships, proprietary product formula, and licenses and permits are often valued using the income approach and the multiperiod excess earnings method (MEEM).

Because it is common to use multiple valuation methods, the analyst should be careful not to overvalue the intangible asset values. That is, the analyst should be careful not to assign the same value increment to more than one intangible asset category. Likewise, the analyst should be careful to value all of the company’s intangible asset categories — and not let any value increment “fall through the cracks.”

In the typical AA method analysis, the analyst will use one or more income approach methods to value some of the company’s intangible assets. Most income approach methods include some type of contributory asset charge procedure. That procedure helps to avoid double-counting intangible asset values. Similarly, most income approach methods include some type of residual earnings or excess earnings calculation procedure. That procedure helps to avoid the undercounting of intangible asset values.

**Intangible value and in the nature of goodwill**

This category of assets includes the construction company’s goodwill and going-concern value. It is relatively easy for the analyst to identify the existence of goodwill. If the company is a going-concern business, it probably owns goodwill. Both the existence of historical financial statements and of financial projections and forecasts are indicia of goodwill. The existence of goodwill does not indicate the value of goodwill. In other words, just because a company owns goodwill doesn’t mean that the goodwill has a positive value. A company’s goodwill can have a positive value, a zero value, or a negative value.

Analysts often apply the capitalized excess earnings method (CEEM) to estimate the value of goodwill in the application of the AA method. The CEEM is particularly applicable in an AA method analysis. This is because the CEEM relies on the values already assigned by the analyst to the current assets, real estate and TPP, and IRP and IPP. In the CEEM, the analyst assigns a fair rate of return (usually based on the company’s cost of capital) to all of the identifiable assets.
This calculation indicates the required earnings. The analyst compares the company's actual earnings (usually measured at the earnings before interest and taxes level) to the company's required earnings.

If the actual earnings exceed the required earnings, then the difference (the excess earnings amount) is capitalized as an annuity in perpetuity. This positive annuity value is called goodwill. If the actual earnings are less than the required earnings, then the difference (the income shortfall) is capitalized as an annuity in perpetuity. This negative annuity value is called economic obsolescence. This economic obsolescence (or negative goodwill value) is used to reduce the values of the other identified assets.

Using this particular CEEM application, the analyst can use the goodwill value (positive or negative) to avoid overcounting or undercounting asset values in the AA method.

Other assets
The other assets category is principally composed of two groups of assets:
1. noncurrent financial assets and
2. excess or nonoperating assets.

The noncurrent financial assets include such assets as deferred federal income tax (DFIT) and investments in unconsolidated subsidiaries. The value of the DFIT account may change based on the analyst's revaluation of depreciable tangible assets or amortizable intangible assets. The DFIT account value may also change based on the company's assumed sale transaction structure.

The value of investments in subsidiaries (or in long-term notes receivable or similar investments) will change if the analyst revalues the underlying subsidiary. The analyst may or may not revalue these noncurrent financial assets depending on their materiality compared to the construction company.

The excess or nonoperating assets are usually tangible assets that are not being used by the company. Examples of this asset category include land held for investment purposes, assets of discontinued operations, or assets held for sale. Regardless of the standard of value and premise of value used in the company analysis, this asset category is typically valued-based on a net realizable value. That value represents the expected selling price of the asset less the expected costs of disposal.

Current liability accounts
The company's current liabilities often include accounts and notes payable, accrued expenses, and income taxes payable. Customer deposits are also recorded as current liabilities if they are expected to be earned during the next year. This account category also includes the current portion of the company's long-term debt.

As these liability accounts are all due in less than one year, there is usually little revaluation involved with the current liability accounts. However, it is common for the analyst to include the current portion of noncurrent liabilities with the long-term debt accounts — and then revalue the entire long-term liabilities balance.

Long-term liability accounts
Long-term liabilities typically include bonds, notes, mortgages, and debentures payable. In the AA method analysis, the long-term liability accounts are easy for the analyst to identify. This is because these liabilities are recorded on the balance sheet.

Depending on the applicable standard of value in the assignment, these liabilities are often restated to the amount at which the liability could be extinguished as of the valuation date. The analyst may consider various factors in the current value analysis of these long-term liabilities, such as embedded interest rate versus current market interest rate, term to maturity, payment history, prepayment penalties, conversion features, and whether the instrument is callable.

If the current value amounts are materially different from the recorded balances, the analyst will substitute the current values of the long-term liability accounts on the balance sheet.
### EXHIBIT 1 Brown Construction Company Balance Sheet As of December 31, 2016 in $000s

<table>
<thead>
<tr>
<th>Assets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assets:</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>1,000</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>4,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>5,000</td>
</tr>
<tr>
<td>Real Estate and Equipment:</td>
<td></td>
</tr>
<tr>
<td>Land and Buildings</td>
<td>10,000</td>
</tr>
<tr>
<td>Machinery and Equipment</td>
<td>10,000</td>
</tr>
<tr>
<td>Other Assets:</td>
<td></td>
</tr>
<tr>
<td>Investments in Subsidiaries</td>
<td>10,000</td>
</tr>
<tr>
<td>Total Assets</td>
<td>40,000</td>
</tr>
<tr>
<td>Liabilities and Owners' Equity</td>
<td></td>
</tr>
<tr>
<td>Current Liabilities:</td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>4,000</td>
</tr>
<tr>
<td>Accrued Expenses</td>
<td>4,000</td>
</tr>
<tr>
<td>Current Portion of Long-Term Debt</td>
<td>4,000</td>
</tr>
<tr>
<td>Long-Term Liabilities:</td>
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</tr>
<tr>
<td>Notes Payable</td>
<td>10,000</td>
</tr>
<tr>
<td>Mortgages Payable</td>
<td>8,000</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>30,000</td>
</tr>
<tr>
<td>Total Owners' Equity</td>
<td>30,000</td>
</tr>
<tr>
<td>Total Liabilities and Owners' Equity</td>
<td>40,000</td>
</tr>
</tbody>
</table>

### EXHIBIT 2 Brown Construction Company Fair Market Value As of December 31, 2016 in $000s

<table>
<thead>
<tr>
<th>Assets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assets:</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>1,000</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>3,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>6,000</td>
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<tr>
<td>Real Estate and Equipment:</td>
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<tr>
<td>Land and Buildings</td>
<td>13,000</td>
</tr>
<tr>
<td>Machinery and Equipment</td>
<td>12,000</td>
</tr>
<tr>
<td>Intangible Assets:</td>
<td></td>
</tr>
<tr>
<td>Internally Developed Computer Software</td>
<td>7,000</td>
</tr>
<tr>
<td>Trained and Assembled Workforce</td>
<td>3,000</td>
</tr>
<tr>
<td>Customer Construction Contracts</td>
<td>5,000</td>
</tr>
<tr>
<td>Intangible Value in the Nature of Goodwill</td>
<td>2,000</td>
</tr>
<tr>
<td>Total Assets</td>
<td>50,000</td>
</tr>
<tr>
<td>Liabilities and Owners' Equity</td>
<td></td>
</tr>
<tr>
<td>Current Liabilities:</td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>4,000</td>
</tr>
<tr>
<td>Accrued Expenses</td>
<td>4,000</td>
</tr>
<tr>
<td>Long-Term Liabilities:</td>
<td></td>
</tr>
<tr>
<td>Notes Payable</td>
<td>12,000</td>
</tr>
<tr>
<td>Accrued Expenses</td>
<td>10,000</td>
</tr>
<tr>
<td>Contingent Liabilities:</td>
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</tr>
<tr>
<td>Litigation Claims</td>
<td>10,000</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>40,000</td>
</tr>
<tr>
<td>Total Owners' Equity</td>
<td>20,000</td>
</tr>
<tr>
<td>Total Liabilities and Owners' Equity</td>
<td>40,000</td>
</tr>
</tbody>
</table>
**Contingent liabilities**

Unlike long-term liabilities, contingent liabilities are not recorded on the balance sheet. The existence of contingent liabilities may be disclosed in the footnotes to audited financial statements. Often, these disclosures tell the analyst where to look. However, they do not tell the analyst the value of the contingent liabilities. And, often, the valuation date is not the same as the audited financial statement date.

Therefore, the analyst may have to perform a fair amount of due diligence to identify the existence of contingent liabilities. The analyst will often interview the company operations and financial management (and general counsel), if such executives are made available as part of the valuation process. While there are many types of contingent liabilities, the analyst may enquire about employee disputes, litigation claims, contract disputes, taxation audits and other issues, and regulatory agency reviews.

The first step related to contingent liabilities is to identify the liability. The second step is to estimate a value for the liability. The analyst can use many different methods to conclude a fair value for these contingencies, including scenario analysis, decision tree analysis, and others. Ultimately, all of these analyses involve estimating (1) an amount of the liability payment, (2) the timing of the liability payment, and (3) the probability of the liability payment. The present value of the various alternative payout events is an indication of the contingent liability value.

**Net asset value conclusion**

The net asset value conclusion represents the purely mathematical procedure in the AA method analysis. The analyst has used judgment and applied valuation approaches and methods to estimate the value of all of the company’s asset accounts. And, the analyst has used judgment and applied valuation approaches and methods to estimate the value of all of the company’s liability accounts. At this point in the analysis, the analyst only has to subtract the total liability value from the total asset value to conclude the net asset value.

The net asset value is also called the total equity value. It is the total of all of the construction company equity accounts. So this total would include both common stock and preferred stock — and this total would include both voting stock and nonvoting stock.

As mentioned previously, this total equity indication is typically concluded on a marketable, controlling ownership interest level of value. If the valuation subject is some ownership interest other than 100 percent of the construction company equity, then the analyst will have to identify and apply appropriate valuation adjustments. Such valuation adjustments could include the following:

1. discount for lack of control and
2. discount for lack of marketability.

Presumably, any other entity-level valuation adjustments were already considered in the asset-category valuation analyses. Such entity-level valuation adjustments could include key person dependence, key customer dependence, key supplier dependence, and so forth.

**Illustrative example**

An analyst has been retained to estimate the fair market value of the total equity of Brown Construction Company (Brown) as of December 31, 2016. Let’s assume that Brown is a family-owned construction contractor company. The analyst decided to use the asset-based valuation approach and the AA valuation method.

The Brown GAAP basis balance sheet for December 31, 2016, is presented in Exhibit 1. On this GAAP basis balance sheet, tangible assets are recorded at historical cost less depreciation. In addition, no internally developed intangible assets are recorded on this balance sheet.

The analyst documented the AA method valuation analysis in Exhibit 2.

First, the analyst considered all of the Brown current asset accounts. Based on an analysis of the aged accounts receivable balance, the analyst revalued this account from $4,000 to $3,000. (All figures are presented in 000s.) In addition, the analyst restated the inventory balance...
from the $5,000 last in, first out accounting convention to a $6,000 replacement cost value.

Second, the analyst considered all of the Brown real estate and TPP. The analyst used the cost approach and the RCNLND method to value both the real estate and the TPP. Based on the RCNLND analysis, the analyst estimated the fair market value of the real estate to be $13,000 — compared to a historical cost less depreciation (HCLD) of $10,000. Based on the RCNLND analysis, the analyst estimated the fair market value of the TPP to be $12,000 — compared to an HCLD of $10,000.

Third, the analyst separately valued the Brown unconsolidated ownership interest in its subsidiary, Green Roadbuilders (Green). The analyst used the market approach and the guideline publicly traded company method to value the total equity of Green at $20,000. Brown owns 40 percent of the Green equity. Accordingly, the analyst valued the Brown ownership interest at $8,000. This $8,000 fair market value estimate represents a value decrement compared to the $10,000 carrying value of this investment.

Fourth, the analyst performed a comprehensive due diligence analysis to identify all of the Brown IRP and IPP. This due diligence revealed the following intangible assets: internally developed computer software, customer contracts (for, let’s say, construction projects in progress), and a trained and assembled workforce.

Brown uses its internally developed and proprietary computer software for all of its administrative and project management functions. The analyst used the cost approach and the RCNLND method to estimate a $7,000 fair market value for this intangible asset.

Over the years, Brown has assembled an executive, technical, and operations staff of considerable experience and expertise. This assembled workforce is a valuable intangible asset. The analyst used the cost approach and the RCNLND method to estimate the $3,000 cost to recreate a workforce of comparable experience and expertise.

At any point in time, Brown has several dozen construction projects in various stages of completion. The analyst used the income approach and the MEEM to value the customer contracts. Working with management, the analyst projected the remaining profit (measured as net cash flow) to be earned on each contract. The analyst present valued that future cash flow projection at the Brown 10 percent weighted average cost of capital (WACC). This analysis indicated a $5,000 fair market value for this customer-related intangible asset.

Finally, with regard to intangible assets, the analyst used the income approach and the CEEM to estimate the fair market value of the goodwill. At this point in the analysis, the analyst had concluded the fair market value of the working capital assets (current assets minus current liabilities), real estate and TPP, and identifiable intangible assets. The analyst assigned a fair rate of return (based on the Brown WACC) to this total asset value to conclude the Brown required earnings. The analyst compared the Brown actual earnings (measured as earnings before interest and taxes) to this required earnings level. Based on this comparison, Brown was generating a small amount of excess earnings. The analyst capitalized these excess earnings as an annuity in perpetuity to conclude a $2,000 fair market value for the goodwill.

Fifth, the analyst moved from the asset side of the balance sheet to the liability side. The analyst next considered the current liability accounts. The analyst concluded that the recorded balances for accounts payable ($4,000) and accrued expenses ($4,000) indicated the fair market values of those accounts. The analysis included the current portion of long-term debt in the valuation of the non-current liabilities.

Sixth, the analyst considered the notes payable and mortgage payable. The analyst concluded that the embedded interest rates on these debt instruments were sufficiently close to current market interest rates so that no liability revaluation was required. The ana-
lyst included the current portion of the long-term debt in the noncurrent liability account.

Seventh, the analyst performed additional due diligence procedures to identify and value any contingent liabilities. The analyst identified several litigation claims against Brown, all related to previous construction projects. The analyst worked with both company management and legal counsel to estimate expected future claim payment amounts, including probabilities and timing of payments. The analyst calculated a present value of the mathematical (probability weighted) expectation of future claims payments of $10,000. The analyst recorded this $10,000 contingent liability value on the valuation balance sheet.

Eighth, the analyst can calculate the net asset value by reference to the Exhibit 2 fair market value basis balance sheet. At this point in the valuation, the analyst has concluded the fair market value of all of the assets (both tangible and intangible) of $60,000. And, the analyst has concluded the fair market value of all of the liabilities (both recorded and contingent) of $40,000. The difference between these two value indications (i.e., total asset value minus total liability value) is the fair market value of the total equity.

As indicated in Exhibit 2, and based on this illustrative AA method analysis, the analyst concluded $20,000 as the fair market value of the Brown total equity.

Summary
The asset-based approach is a generally accepted business valuation approach. And, the AA method is a generally accepted asset-based approach valuation method. The AA method is particularly applicable to the valuation of construction companies, whether the company is tangible-asset-intensive or intangible-asset-intensive.

The AA method is also particularly applicable for construction company business valuations performed for transaction, taxation, or litigation purposes. That is because this method not only provides a business value conclusion, it also identifies each tangible asset and intangible asset component of the total business value.

This article summarized the conceptual basis for the AA method. This article presented summary comments with regard to each category of company assets and company liabilities. Finally, this article presented an illustrative example of the application of the AA method to value the hypothetical family-owned Brown Construction Company. As long as the analyst is careful to include all of the company assets (both tangible and intangible) and all of the company liabilities (both recorded and contingent) in the analysis, the AA method will provide a credible business valuation of the subject construction company.

NOTES