



Asset-Based Approach to Business Valuation

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Discussion Outline

- Reasons to use the asset-based approach
- Practical strengths and weaknesses of the approach
- The asset-based approach is not the cost approach
- Generally accepted asset-based approach valuation methods
- Asset accumulation method—principles and procedures
- Adjusted net asset value method—principles and procedures
- Asset accumulation method—illustrative example
- Adjusted net asset value method—illustrative example
- Important take-aways from the asset-based approach
- Summary and conclusion; questions and discussion



Theory of the Asset-Based Approach

- The asset-based approach is one of the three generally accepted business valuation approaches
- All business valuation professional standards—including SSVS—require the analyst to consider the asset-based approach
- The income approach and the market approach focus on the company's income statement
- The asset-based approach focuses on the company's balance sheet
- The income approach considers the amount of income that the owner/operator will receive from owning the business interest



Theory of the Asset-Based Approach (cont.)

- The market approach considers the price that the owner/operator would receive from a sale of the business interest (in an IPO or an M&A transaction)
- The asset-based approach considers the cost to recreate the subject business interest
- The asset-based approach simulates the business acquirer's make vs. buy investment decision:
 - the potential buyer can buy the subject business (at the asset-based approach value indication) or
 - the potential buyer can incur the costs to recreate all of the subject entity operating assets (and then operate the replacement business)



Application of the Asset-Based Approach

- The basic formula of all asset-based approach analyses is:
value of all of the company assets
minus
value of all of the company liabilities
equals
value of the company owners' equity
- The company's GAAP balance sheet is the starting point in the analysis; it is not the stopping point in the analysis
- Accounting "net book value" is not an asset-based approach value indication
- The asset-based approach requires a current value measurement—not a GAAP balance—for all of the company's assets and liabilities



Application of the Asset-Based Approach (cont.)

- The asset-based approach requires consideration of all of the company's asset accounts
 - Current assets
 - Real estate
 - Tangible personal property
 - Intangible assets (including goodwill)
 - Other assets
 - investment in unconsolidated subsidiaries
 - deferred income taxes
 - other operating assets



Application of the Asset-Based Approach (cont.)

- The asset-based approach requires consideration of all of the company's liability accounts
 - Current liabilities
 - Long-term debt accounts
 - bonds
 - mortgages
 - notes
 - debentures
 - Other long-term liabilities
 - pensions
 - other employee benefits
 - Deferred income taxes
 - Contingent liabilities



Valuation of Assets and Liabilities

- The analyst will value the subject company assets and liabilities using the generally accepted property valuation approaches:
 - Cost approach
 - Income approach
 - Market approach
- The analyst should value all of the subject asset and liability accounts using the same standard of value—i.e., the subject business valuation assignment standard of value:
 - Fair value
 - Fair market value
 - Investment value
 - Acquisition value
 - Owner value
 - Other standard of value



Valuation of Assets and Liabilities (cont.)

- The analyst should value all of the subject asset and liability accounts using the same premise of value—i.e., the subject business valuation assignment premise of value:
 - Value in continued use, as a going concern
 - Value in exchange, as part of an orderly disposition
 - Value in exchange, as part of a forced liquidation
- For business valuation purposes, the analyst will typically apply the going-concern value premise of value
 - The asset-based approach is perfectly applicable to valuing a going-concern business
 - The asset-base approach does not always conclude a liquidation premise of value
 - In fact, numerous adjustments have to be made to the typical asset-based approach analysis in order to conclude a liquidation value



Aggregate vs. Individual Valuation of Assets and Liabilities

- Analysts often apply the asset-based approach by valuing each individual category of asset and liability account.
 - This method is commonly called the asset accumulation (“AA”) method
 - The AA method is particularly applicable for certain business valuation purposes



Aggregate vs. Individual Valuation of Assets and Liabilities (cont.)

- Analysts can also apply the asset-based approach by valuing all of the subject asset and liability accounts collectively.
 - This method is commonly called the adjusted net asset value (“ANAV”) method
 - The analyst makes an aggregate adjustment to recognize the total revaluation of all of the subject assets and liabilities
 - That aggregate revaluation adjustment is often called: intangible value in the nature of goodwill
 - That aggregate revaluation adjustment is often quantified using a capitalized excess earnings method (“CEEM”) analysis



Aggregate vs. Individual Valuation of Assets and Liabilities (cont.)

- If all of the valuation variables are applied consistently, the asset-based approach should conclude the same value indication whether the analyst applies the AA method or the ANAV method.



Conclusions of the Asset-Based Approach

- The asset-based approach can be applied to conclude any of the following valuation objectives:
 - Target company total assets
 - Target company invested capital
 - Target company total equity
 - Target company total common equity
 - Specific block of target company equity securities
- The asset-based approach can be applied to value operating companies—on a going-concern basis—in virtually every industry:
 - The asset-based approach is not only applicable to the valuation of asset-holding companies
 - The asset-based approach is not only applicable to conclude a liquidation value



When to Use the Asset-Based Approach

- There are many instances when the asset-based approach is ideally suited to the business valuation assignment.
- Situations when it is important for the client to know the value of a company's component assets include:
 - Income taxes – Conversion from C corporation status to S corporation status
 - Income taxes – Determination of solvency/insolvency regarding recognition of COD income
 - Acquisitions – Buyer wants to estimate depreciation and amortization expense as part of a DCF analysis
 - Acquisitions – Buyer may face questions from dissenting shareholders: Why is purchase price premium so high?
 - Financing – Asset values are needed for asset-based financing



When to Use the Asset-Based Approach (cont.)

- Financing – Acquirer needs to comply with debt covenant ratios
- Property tax – Unit value companies need to separate (taxable) tangible assets from (nontaxable) intangible assets
- Property tax – Unit value should only include assets in place—and exclude value of future tangible and intangible assets
- Family law – Part of family business value may be personal goodwill (non-marital asset)
- Family law – Part of family business value may be from assets owned premarriage or contributed solely by one spouse
- Other litigation – Quantify business damages due to breach of contract (e.g., noncompetition agreement, supply agreement)
- Other litigation – Quantify business damages due to tort (e.g., IP infringement, condemnation/eminent domain taking of operating company)



Other Reasons to Apply Asset-Based Approach

- Professional standards require consideration of all three generally accepted business valuation approaches
- There are times when the income approach or market approach are not available
- Inadequate historical or prospective financial statements
- Inadequate guideline public companies or M&A transactions
- The asset-based approach provides confirmatory evidence to the income and market approach value indications
- The asset-based approach provides another value indication when the income approach and market approach values diverge
- The asset-based approach provides support to a business valuation prepared within a litigation environment



The Asset-Based Approach Is Not the Cost Approach

- The cost approach is a property valuation approach. It may be used to value individual asset accounts.
- The generally accepted cost approach valuation methods include:
 - replacement cost new less depreciation (“RCNLD”)
 - reproduction cost new less depreciation (“RPCNLD”)
 - historical cost less depreciation (“HCLD”)
- The cost approach is often used to value certain categories of assets on a value in use, going-concern premise of value basis:
 - industrial and commercial real estate
 - industrial and commercial tangible personal property
 - contributory (backroom) intangible assets – computer software, product formula and designs, engineering drawings, assembled workforce



The Asset-Based Approach Is Not the Cost Approach (cont.)

- The asset-based approach values all of the company assets and liabilities.
- The asset-based approach will apply the most appropriate property valuation approach to each individual asset category
- The asset-based approach will incorporate cost approach, income approach, and market approach analyses to value the various asset categories—and particularly the company’s intangible asset categories
- As a general rule, the asset-based approach will apply the income approach to at least one intangible asset category



The Asset-Based Approach Is Not the Cost Approach (cont.)

- In particular, the asset-based approach will typically apply the capitalized excess earnings method (“CEEM”) or multiperiod excess earnings method (“MEEM”) to value either:
 - customer-related intangible assets or
 - intangible value in the nature of goodwill
- In the CEEM or MEEM analysis, the analyst applies a contributory asset charge based on the cost approach value indications of other tangible/intangible assets; this procedure avoids double counting of asset value and identifies cost approach economic obsolescence (if any)



The Asset-Based Approach and Asset Holding Companies

- The asset-based approach is ideally suited for the business valuation of an investment-intensive asset holding company
- The following figure illustrates the general application of the asset-based approach:

Figure 1

Alpha Investment Holding Company Illustrative Assets and Liabilities

<u>Assets</u>	<u>Liabilities</u>
Cash and money market instruments	Accounts payable and taxes payable
Publicly traded stocks and bonds	Mortgages payable
Oil and gas exploration/production interests	Notes payable
Land and land improvements	
Options and other derivative securities	Equals:
Less: <u>Net asset value</u>	



The Asset-Based Approach and Operating Companies

- The asset-based approach may also be used in the business valuation of industrial and commercial operating companies
- The figure on the following page illustrates the general application of the asset-based approach



Asset-Based Approach and Operating Companies

Figure 2
Beta Operating Company
Illustrative Assets and Liabilities

Assets

Cash, receivables, and inventory

Land and buildings

Machinery and equipment

Trademarks and trade names

Trained and assembled workforce

Customer (contract) relationships

Goodwill

Less:

Liabilities

Accounts payable and accrued expenses

Taxes payable

Bonds, notes, and mortgages payable

Equals:

Net asset value



Valuation of Liabilities in the Asset-Based Approach

- Analysts focus on the valuation of the assets in any asset-based approach valuation method.
- However, the valuation of the liabilities is also an important procedure in this approach.
- The first procedure is to understand the appropriate standard of value and the assignment purpose. The analyst may conclude a different value for the same liability if the standard of value is fair value versus fair market value versus investment value versus some other standard of value.
- If the valuation purpose is a solvency analysis prepared within a litigation context, the analyst will typically consider the recorded balances in the subject company liability accounts.



Valuation of Liabilities in the Asset-Based Approach (cont.)

- Outside of a solvency analysis, the analyst may be more concerned with the current value of the company liabilities than with the recorded balance of the company liabilities.
- Depending on the applicable standard of value, the analyst is more concerned with an expected trading price for the debt instruments.
- That is, how much would an investor pay to own, say, the note payable?
- Or, how much would the debtor have to pay to the creditor (i.e., how much would the creditor be willing to receive) to extinguish the note payable?



Liability Valuation Factors

- In the valuation of liabilities, the analyst typically considers such factors as:
 1. the debt instrument's term to maturity,
 2. the entity's historical debt service record,
 3. the debt instrument's embedded interest rate versus a current market interest rate,
 4. whether the debt instrument is callable (and what are the call triggers),
 5. any security interest related to the debt,
 6. the company's current credit rating,
 7. the company's current financial condition,
 8. the company's budget or financial projections,
 9. any prepayment or other penalties related to the debt,
 10. any recent trades of guideline debt instruments,
 11. the subject debt amortization (payment) schedule, and
 12. the existence and timing of any debt balloon payments.



Contingent Liabilities

- In addition to recorded liabilities, analysts have to identify and value any contingent liabilities:
 - There are generally accepted methods that may be used to value contingent liabilities.
 - The analyst attempts to estimate the net present value (“NPV”) of the expected future cash payments associated with extinguishing that liability.
 - That NPV considers the expected amounts of—and the expected timing of—the future cash payments.
 - Such an NPV analysis typically considers the probabilities associated with the subject company future contingent liability payment.
 - This consideration may be quantified through either scenario analysis or a risk-adjusted present value discount rate.



Types of Contingent Liabilities

- Contingent liabilities may include the following types of claims against the subject company:
 1. Tax audit or other taxation-related disputes
 2. Employee-related disputes
 3. Environmental claims and other clean-up issues
 4. Tort (such as infringement) litigation claims
 5. Breach of contract litigation claims



Information regarding Contingent Liabilities

- Unlike liabilities that are recorded on the company's balance sheet, there is no single data source for the analyst to identify off-balance-sheet contingent liabilities.
- If such interviews are available, the analyst may interview the company management and legal counsel.
- Analysts often review board of directors meeting minutes, company management committee meetings, and company financial plans and forecasts in order to identify contingent liabilities.



Income Taxes in the Asset-Based Approach

- Most companies have income taxes payable (short-term liability) and deferred income taxes (long-term liability) accounts already recorded on the balance sheet.
- The analyst has to decide if—and how much of—a built-in-gain-related tax liability should be recognized as part of the asset-based approach revaluation process.
- Whether a tax liability account is created as part of the valuation process depends on two factors:
 - The subject valuation premise of value
 - The asset valuation approaches applied in the analysis



Income Taxes in the Asset-Based Approach (cont.)

- If the valuation premise of value is a liquidation value, an income tax liability should be recorded as part of the analysis.
- If the valuation premise of value is a going-concern value, an income tax liability may be recorded as part of the analysis, depending on which asset valuation approaches are applied.
- To estimate the capital gain tax liability, the analyst needs to consider:
 - The estimated value of the tangible assets and intangible assets
 - The tax basis of the tangible assets and intangible assets
 - The estimated capital gain tax rate
- The analyst should realize that the depreciation recapture portion of the tangible asset gain is subject to ordinary income tax rates
- The analyst should realize that the tax basis for most intangible assets is zero.



Income Tax Liability Procedures

- If the company assets are primarily valued using the cost approach, no income tax liability is created. A corporate acquirer does not create a tax liability when it buys (i.e., recreates or replaces) the target company tangible assets and intangible assets.
- If the company assets are primarily valued using the market approach, an income tax liability should be estimated. The target company will incur an income tax liability when it sells its tangible assets and intangible assets at the appraised values.



Income Tax Liability Procedures (cont.)

- If the company assets are primarily valued using the income approach, an income tax liability may—or may not—be estimated:
 - If the income approach valuation variables are current owner/operator-related variables (i.e., value in continued use variables), then no income tax liability is created.
 - If the income approach valuation variables are next owner/willing buyer-related variables (i.e., value in exchange variables), then an income tax liability is created.
- The total estimated income tax liability based on the asset revaluations is typically recorded on the asset-based approach balance sheet as a deferred income tax liability.



AA Method Procedures

- The first procedure is the identification of all of the company's asset and liability categories. This procedure starts with the company's balance sheet.
- It is helpful to start with a balance sheet prepared as close as possible to the assignment valuation date.
- Sometimes, the analyst will simply not have a balance sheet available.
- In that case, the analyst has to start with a blank page and independently identify all of the company's asset categories and liability categories.



Asset and Liability Identification

- The analyst identifies all of the company's assets.
- This process includes all of the assets that are already recorded on the balance sheet.
- And, this process includes all of the assets that are owned and operated by the company—but that are not recorded on the balance sheet.
- Next, the analyst identifies all of the company's liabilities.
- This process includes all of the liabilities that are already recorded on the 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.



Asset and Liability Identification (cont.)

- Contingent liabilities are not typically recorded on a balance sheet.
- Income taxes related to the hypothetical asset sale and selling expenses related to the hypothetical sale transaction would be considered as liabilities.



Asset and Liability Valuation

- The second procedure 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.
- The analyst will record all of the previously unrecorded assets and liabilities at the assignment standard of value.
- The analyst considers all of the generally accepted property valuation approaches in this procedure.
- The analyst ensures that the individual asset and liability accounts are restated to the same standard of value—and the same premise of value—as the subject business valuation assignment.



AA Method Value Conclusion

- The third procedure is the mathematical subtraction of the total liabilities value from the total asset value.
- This subtraction indicates the value of the company's total equity.
- This value indication can be adjusted to conclude (1) the value of the invested capital or (2) the value of one class of the equity (e.g., voting common stock).
- The AA method value conclusions is typically stated as a marketable, controlling ownership interest level of value.
- To the extent that another level of value is appropriate (e.g., a nonmarketable, noncontrolling level of value), the analyst applies appropriate valuation adjustments.



Current Asset Accounts

- Current asset accounts typically include cash, marketable securities, prepaid expenses, accounts receivable, materials and supplies, and inventory.
- The analyst performs whatever due diligence procedures that may be necessary to confirm the existence of these current asset accounts.
- The analyst restates the asset account balances to a current value as of the valuation date.
- For most current asset accounts, the value does not change materially under alternative standards of value.
- The analyst often applies a simplifying assumption: that the recorded current asset balance is representative of the intended standard of value.



Real Estate and 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 and the current value as of the valuation date.
- Depending on experience and expertise, the analyst may (1) perform the asset revaluation or (2) rely on property appraisals performed by third-party specialists.



Intangible Real Property

- The intangible real property (“IRP”) category includes the following types of assets:
 - Real property leases
 - Easements and rights of way
 - Air rights, water rights, surface use rights
 - Mineral, mining, and extraction rights
 - Building permits and development licenses
- Each of these IRP categories can be valued by various cost approach, market approach, or income approach property valuation methods.



Intangible Personal Property

- 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)
 6. Intellectual property intangible assets (e.g., patents, copyrights, trademarks)



Intangible Personal Property (cont.)

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



Intangible Value in the Nature of Goodwill

- This category of assets includes goodwill and going-concern value.
- If the company is a going-concern business, it probably owns goodwill.
- The existence of goodwill does not indicate the value of goodwill.
- A company's goodwill can have a positive value, a zero value, or a negative value.
- Analysts often apply the CEEM method to estimate the value of goodwill.
- The CEEM may rely on the values already assigned to the company's current assets, real estate and TPP, and IRP and IPP.



Goodwill and CEEM

- In the CEEM, the analyst assigns a fair rate of return to all identifiable assets. This calculation indicates the required earnings.
- The analyst compares the actual earnings to the required earnings.
- If the actual earnings exceed the required earnings, the difference (the excess earnings amount) is capitalized as an annuity in perpetuity. This positive annuity value is goodwill.
- If the actual earnings are less than the required earnings, the difference (the income shortfall) is capitalized as an annuity in perpetuity. This negative annuity value is called economic obsolescence.



Goodwill and CEEM

- This economic obsolescence (or negative goodwill) is used to reduce the values of the other identified assets.
- Using this CEEM application, the analyst can use the goodwill value (positive or negative) to avoid overvaluing or undervaluing the company's total assets.



Other Assets

- The other assets category is principally composed of:
 - noncurrent financial assets and
 - excess or nonoperating assets.
- The noncurrent financial assets include deferred federal income tax (“DFIT”) and investments in unconsolidated subsidiaries.
- The value of investments in subsidiaries (or in long-term notes receivable or similar investments) will change if the analyst revalues the underlying subsidiary entity.
- 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.



Current Liability Accounts

- 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 also includes the current portion of the company's long-term debt.
- Since these liabilities are all due in less than one year, there is usually little revaluation involved.
- 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 include bonds, notes, mortgages, and debentures payable.
- Depending on the applicable standard of value, 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, 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.



Contingent Liabilities

- The analyst may have to perform a fair amount of due diligence to identify the existence of contingent liabilities.
- The analyst will often interview management if such executives are made available as part of the valuation process.
- The analyst may enquire about employee disputes, litigation claims, contract disputes, taxation audits, and other issues, and regulatory agency reviews.
- The first step 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.



Contingent Liabilities (cont.)

- 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 the contingent liability value.



Net Asset Value Conclusion

- The net asset value conclusion represents a purely mathematical procedure in the AA method analysis.
- The analyst subtracts the total liability value from the total asset value to conclude the net asset value.
- The total equity indication is typically concluded on a marketable, controlling ownership interest level of value.
- If the subject is other than 100 percent of the equity, then the analyst will apply appropriate valuation adjustments, including:
 - discount for lack of control and
 - discount for lack of marketability.



AA Method Illustrative Example

- An analyst is retained to estimate the fair market value of the total equity of Gamma Company (“Gamma”) as of December 31, 2018.
- The analyst decides to use the asset-based approach and the AA method.
- The GAAP basis balance sheet for December 31, 2018, is presented in Exhibit 1 (all numbers are in \$000s).
- Tangible assets are recorded at historical cost less depreciation.
- No internally developed intangible assets are recorded on this balance sheet.
- Exhibit 2 summarizes the AA method valuation (all numbers are in \$000s).



Exhibit 1
 Gamma Company
 Historical Cost Balance Sheet
 As of December 31, 2018 (in \$000s)

<u>Assets:</u>		<u>Liabilities and Owners' Equity:</u>	
<u>Current Assets:</u>		<u>Current Liabilities:</u>	
Cash	1,000	Accounts Payable	4,000
Accounts Receivable	4,000	Accrued Expenses	4,000
Inventory	<u>5,000</u>	Current Portion of Long-Term Debt	<u>4,000</u>
	10,000		12,000
<u>Real Estate and Equipment:</u>		<u>Long-Term Liabilities:</u>	
Land and Buildings	10,000	Notes Payable	10,000
Machinery and Equipment	10,000	Mortgages Payable	<u>8,000</u>
			18,000
<u>Other Assets:</u>		<u>Total Liabilities</u>	
Investment in Subsidiary	<u>10,000</u>		30,000
		<u>Total Owners' Equity</u>	
			<u>10,000</u>
<u>Total Assets</u>	<u>40,000</u>	<u>Total Liabilities and Owners' Equity</u>	<u>40,000</u>



AA Method Illustrative Example (cont.)

- First, the analyst considers all current asset accounts.
- Based on an analysis of the aged accounts receivable balance, the analyst revalued this account from \$4,000 to \$3,000.
- The analyst restated the inventory balance from the \$5,000 LIFO accounting convention to a \$6,000 replacement cost value.
- Second, the analyst considers all real estate and TPP.
- The analyst used the cost approach and the RCNLD method to value both the real estate and the TPP.
- Based on the RCNLD analysis, the analyst estimated the real estate fair market value at \$13,000—compared to a historical cost less depreciation (“HCLD”) of \$10,000.



AA Method Illustrative Example (cont.)

- Based on the RCNLD analysis, the analyst estimated the TPP fair market value at \$12,000—compared to an HCLD of \$10,000.
- Third, the analyst separately valued the Gamma unconsolidated ownership interest in its subsidiary, Omega.
- The analyst used the market approach and the guideline publicly traded company (“GPTC”) method to value the Omega total equity at \$20,000.
- Gamma owns 40 percent of the Omega equity.
- The analyst valued the Gamma 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.



AA Method Illustrative Example (cont.)

- Fourth, the analyst performed a comprehensive due diligence analysis to identify all of the Gamma 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.
- Gamma uses its computer software for all administrative and project management functions.
- The analyst used the cost approach and the RCNLD method to estimate a \$7,000 software fair market value.



AA Method Illustrative Example (cont.)

- Over the years, Gamma has assembled an executive, technical, and operations staff of considerable experience and expertise. The analyst used the cost approach and the RCNLD method to estimate the \$3,000 fair market value of the assembled workforce.
- Gamma has several dozen customer 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 Gamma 10 percent weighted average cost of capital (“WACC”).



AA Method Illustrative Example (cont.)

- This analysis indicated a \$5,000 fair market value for this customer-related intangible asset.
- The analyst used the income approach and the CEEM to estimate the goodwill fair market value.
- The analyst 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 WACC) to this total asset value to conclude the required earnings.
- The analyst compared the actual earnings (measured as EBIT) to this required earnings level.



AA Method Illustrative Example (cont.)

- Based on this comparison, Gamma generated a small amount of excess earnings.
- The analyst capitalized these excess earnings as an annuity in perpetuity to conclude a \$2,000 goodwill fair market value.
- Fifth, the analyst moved from the asset side to the liability side of the balance sheet. 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 noncurrent liabilities.



AA Method Illustrative Example (cont.)

- 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 analyst included the current portion of long-term debt in the noncurrent liability account.
- Seventh, the analyst performed due diligence to identify any contingent liabilities.
- The analyst identified several litigation claims against Gamma, all related to previous projects.



AA Method Illustrative Example (cont.)

- The analyst worked with 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.
- Eighth, since most of the Gamma assets were valued by applying the cost approach (based on a value in continued use premise of value), the analyst concluded that there would be no income tax liability created as part of this valuation analysis.
- Ninth, the analyst calculated the net asset value in Exhibit 2.



AA Method Illustrative Example (cont.)

- The analyst concluded the fair market value of all of the assets (both tangible and intangible) of \$60,000.
- The analyst concluded the fair market value of all of the liabilities (both recorded and contingent) of \$40,000.
- The difference between these two value indications is the total equity fair market value.
- Tenth, as indicated in Exhibit 2, the analyst concluded \$20,000 as the total equity fair market value.



Exhibit 2
Gamma Company
Fair Market Value Balance Sheet
As of December 31, 2018 (in \$000s)

<u>Assets:</u>		<u>Liabilities and Owners' Equity:</u>	
Current Assets:		Current Liabilities:	
Cash	1,000	Accounts Payable	4,000
Accounts Receivable	3,000	Accrued Expenses	<u>4,000</u>
Inventory	<u>6,000</u>		8,000
	10,000	Long-Term Liabilities:	
Real Estate and Equipment:		Notes Payable	10,000
Land and Buildings	13,000	Accrued Expenses	<u>12,000</u>
Machinery and Equipment	<u>12,000</u>		22,000
	25,000		
Other Assets:			
Investment in Subsidiary	<u>8,000</u>		
Intangible Assets:		<u>Contingent Liabilities:</u>	
Internally Developed Computer Software	7,000	Litigation Claims	<u>10,000</u>
Trained and Assembled Workforce	3,000		
Customer Construction Contracts	5,000	Total Liabilities	40,000
Intangible Value in the Nature of Goodwill	<u>2,000</u>		
	17,000	Total Owners' Equity	<u>20,000</u>
Total Assets	<u>60,000</u>	Total Liabilities and Owners' Equity	<u>60,000</u>



ANAV Method Introduction

- The ANAV method is not the same analysis as the net book value (“NBV”) method.
- The NBV method is not a generally accepted business valuation method. The NBV “method” is a financial accounting calculation.
- In the so-called NBV method, the analyst relies entirely on data from the company’s financial statements, without the application of valuation analyses or professional judgment.
- Calculating NBV, the analyst subtracts the recorded amount of liabilities (both current and noncurrent) from the recorded amount of assets (both current and noncurrent).
- This calculation provides what is often called the NBV.



ANAV Method Introduction (cont.)

- This NBV calculation describes the mathematical relationships between the assets and the liabilities recorded on the balance sheet.
- For a GAAP balance sheet, these accounts are typically be recorded on a historical cost basis.
- That historical cost basis is typically not indicative of the company owners' equity current value.
- In contrast, the ANAV method may start with the NBV of the company assets and liabilities. Then, the analyst applies professional judgment and employs a series of valuation procedures.
- The result is a current value of the company owners' equity.



ANAV Methodology

- First, the analyst typically starts with the GAAP-based balance sheet.
- The analyst will use the balance sheet dated closest to the valuation date.
- Second, the analyst identifies any nonoperating or excess assets reported on the balance sheet.
- Such assets may include vacant land or other assets held for investment purposes. That category may also include assets that are not necessary for the business but that are enjoyed primarily by the business owners.
- This asset category may include a private aircraft or a vacation home owned by the company.



ANAV Methodology (cont.)

- Nonoperating assets sometimes include the tangible assets of discontinued operations that are being held for disposal.
- Third, the analyst lists all of the reported account balances for the following categories of business operating assets:
 - Working capital assets
 - Tangible assets (including land, buildings, and equipment)
 - Intangible assets (including any recorded intangible assets)
 - Other assets (such as deferred income taxes and unconsolidated investments)



ANAV Methodology (cont.)

- The sum of these asset balances represents the amount of the company's total net operating assets.
- The total operating assets is typically analyzed net of the current liabilities accounts.
- For this purpose, the current liability component of any long-term debt is excluded.
- The total net operating assets should equal the total long-term debt (including the current portion of that debt) plus the total owners' equity recorded on the balance sheet.



ANAV Methodology (cont.)

- Fourth, the analyst begins the aggregate revaluation of all of the total net assets.
- The most common aggregate valuation method is the CEEM.
- The result of the CEEM analysis is often called intangible value in the nature of goodwill.
- This CEEM goodwill value represents the total value increment (or value decrement) compared to the recorded cost-based net operating assets.
- This CEEM calculation may not represent the same goodwill that would be indicated by the AA method.



ANAV Methodology (cont.)

- For the AA method, goodwill represents an individual intangible asset.
- In the CEEM, goodwill typically includes all of the following:
 1. The total revaluation (above the cost-based accounting balance) of the recorded tangible assets
 2. The total revaluation (above the cost-based accounting balance) of all of the recorded intangible assets
 3. The total valuation of all of the identifiable but unrecorded intangible assets
 4. The valuation of any remaining business value in excess of the value increment associated with the company's recorded tangible assets, recorded intangible assets, and unrecorded intangible assets



ANAV Methodology (cont.)

- In the CEEM, the value conclusion represents more than the value of the residual goodwill.
- The CEEM conclusion represents an aggregate revaluation of all of the recorded balance sheet accounts.
- For this reason, the CEEM conclusion is often referred to as intangible value in the nature of goodwill.
- That name is intended to distinguish the CEEM goodwill from the residual goodwill that is concluded in the AA method.
- The CEEM involves multiplying a fair rate of return by the net operating assets balance.
- The product of this multiplication is called the required earnings.



ANAV Methodology (cont.)

- The analyst compares the required earnings to the actual earnings.
- If the actual earnings exceed the required earnings, the company is generating excess earnings.
- The excess earnings are typically capitalized as an annuity in perpetuity.
- The capitalized excess earnings represents the intangible value in the nature of goodwill.
- Fifth, the analyst adds the net operating assets balance to the CEEM goodwill balance.
- This summation represents the value for all of the net assets (i.e., total assets minus current liabilities).



ANAV Methodology (cont.)

- The analyst subtracts the long-term debt from the net asset value. The remainder of that subtraction is the value of the owners' equity.
- Sixth, as a final procedure, the analyst adds the value of any excess or nonoperating assets to the value of the net operating assets—to conclude a total business value.
- This total business value typically represents the sum of the company long-term debt and the company owners' equity.
- The analyst should consider if any contingent liability adjustment or income tax liability adjustment needs to be made to the total business value indication.
- The value of the company equity is: the total business value minus the long-term debt value (and any contingent liability or transaction-related tax liabilities).



How to Handle Negative Goodwill

- Based on the CEEM, it is possible to calculate a negative figure for the intangible value in the nature of goodwill. This result will occur any time the required earnings are greater than the expected actual earnings.
- When the company is generating deficit earnings (instead of excess earnings), the capitalization of the earnings deficiency will indicate negative goodwill.
- The CEEM-derived negative goodwill should be eliminated by reducing the concluded value of the previously valued tangible assets and identifiable intangible assets.
- The CEEM negative goodwill is an indication that the company is experiencing economic obsolescence.



How to Handle Negative Goodwill (cont.)

- Economic obsolescence occurs when a company does not earn a fair rate of return on the value of its tangible assets and intangible assets.
- The existence (and measurement) of economic obsolescence indicates that the subject assets valued by cost approach method should be decreased (by the amount of the economic obsolescence).
- The analyst will decrease the value of all of the cost-approach-measured assets (both tangible and intangible) until the economic obsolescence is reduced to zero.



CEEM Negative Goodwill

- Let's assume that the CEEM analysis indicates a \$1 million negative goodwill.
- Let's assume that the analyst previously valued other tangible and intangible assets using the cost approach and the RCNLD method.
- The sum of all of the other cost-approach-derived asset values is \$10 million.
- The analyst would reduce the cost-approach-derived asset values by 10 percent (\$1 million economic obsolescence divided by \$10 million total RCNLD).
- The resulting cost approach value conclusions—after economic obsolescence—would be \$9 million. At a \$9 million total tangible and intangible asset value conclusion, the CEEM analysis should indicate \$0 of goodwill—and \$0 of remaining economic obsolescence.



ANAV Method Illustrative Example— No Individual Asset Revaluation

- Let's assume an analyst is retained to estimate the value of 100 percent of the Delta Company ("Delta") owners' equity as of December 31, 2018.
- The assignment is to conclude fair market value of the Delta equity on a marketable, controlling ownership interest basis.
- The analyst decides to apply the asset-based approach and the ANAV method.
- The analyst revalues the equity in the aggregate using the CEEM to conclude the total intangible value in the nature of goodwill.
- Exhibit 3 present the Delta historical cost-based balance sheet as of December 31, 2018 (all numbers are in \$000s).



Exhibit 3
Delta Company
Balance Sheet
As of December 31, 2018 (in \$000s)

<u>Assets:</u>		<u>Liabilities and Owners' Equity:</u>	
Current Assets:		Current Liabilities:	
Cash	2,000	Accounts Payable	2,000
Accounts Receivable	3,000	Wages Payable	2,000
Inventory	<u>5,000</u>	Taxes Payable	<u>2,000</u>
Total Current Assets	10,000	Total Current Liabilities	6,000
Property, Plant, and Equipment:		Long-Term Liabilities:	
Land	10,000	Notes Payable	14,000
Buildings	20,000	Mortgages Payable	<u>10,000</u>
Equipment	<u>30,000</u>	Total Long-Term Liabilities	24,000
Less: Accumulated Depreciation	<u>(20,000)</u>	Owners' Equity:	
Property, Plant, and Equipment Net	<u>40,000</u>	Total Owners' Equity	<u>20,000</u>
Total Assets:	<u>50,000</u>	Total Liabilities and Owners' Equity:	<u>50,000</u>



No Individual Asset Revaluation (cont.)

- The analyst worked with management, performed a due diligence analysis, and concluded that the next period normalized EBIT will be \$9 million.
- The analyst concluded that EBIT was the appropriate measure of operating income to use in the CEEM.
- The analyst concluded that the appropriate fair rate of return on all of the tangible and intangible assets is 15 percent.
- The analyst selected this rate of return based on the WACC.
- The analyst concluded a 0 percent expected long-term growth rate in excess earnings.
- The analyst concluded a 15 percent direct capitalization rate.



No Individual Asset Revaluation (cont.)

- Exhibit 4 presents the CEEM analysis.
- In this application of the ANAV method, the analyst will not revalue any of the assets—either the recorded tangible assets or the unrecorded intangible assets.
- The analyst applies the CEEM analysis based on the GAAP basis balance sheet accounts.
- Finally, the analyst prepared the ANAV method balance sheet as of December 31, 2018.
- The analyst adjusted the GAAP-based balance sheet for the CEEM aggregate asset revaluation analysis. This ANAV balance sheet is presented in Exhibit 5.



Exhibit 4
Delta Company
Adjusted Net Asset Value Method Analysis
Intangible Value in the Nature of Goodwill
As of December 31, 2018 (in \$000s)

Capitalized Excess Earnings Method Valuation Analysis:

<u>Delta Account Balances</u>		Fair of Return	Required Earnings
Working Capital Assets [a]	4,000	15%	600
Property, Plant, and Equipment	<u>40,000</u>	15%	<u>6,000</u>
Total Assets	44,000		6,600
<u>Excess Earnings Analysis</u>			
Delta Next Period Normalized Earnings	9,000		
- Delta Required Earnings	<u>6,600</u>		
= Delta Excess Earnings	2,400		
<u>Capitalized Excess Earnings Analysis</u>			
Delta Excess Earnings	2,400		
÷ Direct Capitalization Rate	<u>15%</u>		
= Capitalized Excess Earnings	<u>16,000</u>		
Intangible Value in the Nature of Goodwill:	<u>16,000</u>		

[a] Working capital assets = current assets minus current liabilities.



Exhibit 5
Delta Company
Asset-Based Approach Business Valuation
Adjusted Net Asset Value Method Analysis
As of December 31, 2018 (in \$000s)

<u>Assets:</u>		<u>Liabilities and Owners' Equity:</u>	
<u>Current Assets:</u>		<u>Current Liabilities:</u>	
Cash	2,000	Accounts Payable	2,000
Accounts Receivable	3,000	Wages Payable	2,000
Inventory	<u>5,000</u>	Taxes Payable	<u>2,000</u>
Total Current Assets	10,000	Total Current Liabilities	6,000
 <u>Property, Plant, and Equipment:</u>		 <u>Long-Term Liabilities:</u>	
Land	10,000	Notes Payable	14,000
Buildings	20,000	Mortgages Payable	<u>10,000</u>
Equipment	<u>30,000</u>	Total Long-Term Liabilities	24,000
Less: Accumulated Depreciation			
Property, Plant, and Equipment Net	<u>40,000</u>		
 <u>Intangible Assets:</u>		 <u>Owners' Equity:</u>	
Intangible Value in the Nature of Goodwill	<u>16,000</u>	Total Owners' Equity	<u>36,000</u>
 <u>Total Assets:</u>	 <u>66,000</u>	 <u>Total Liabilities and Owners' Equity:</u>	 <u>66,000</u>



ANAV Method Illustrative Example— Tangible Asset Valuation

- The analyst is retained to estimate the value of 100 percent of the Epsilon Company (“Epsilon”) owners’ equity as of December 31, 2018. The assignment calls for a fair market value standard of value and a marketable, controlling ownership interest level of value. Epsilon has the same GAAP-based balance sheet as Delta.
- The analyst performs a due diligence and estimates that Epsilon will generate \$9 million of EBIT next year.
- The analyst decides to use EBIT as the appropriate income metric to measure any excess earnings.
- The analyst performs a WACC analysis and concludes that 15 percent is the appropriate rate of return on assets.
- The analyst again concludes a zero expected long-term growth rate in excess earnings.



ANAV Method Illustrative Example— Tangible Asset Valuation (cont.)

- The analyst concluded a 15 percent direct capitalization rate.
- The analyst is able to revalue certain of the assets that are already recorded on the balance sheet.
- The analyst performs a market approach analysis to value the inventory. The analyst estimated the expected selling price of the inventory less the corresponding expected selling expense.
- The analyst concluded a \$6 million inventory fair market value.
- Management provided contemporaneous appraisals of the property, plant, and equipment.



ANAV Method Illustrative Example— Tangible Asset Valuation (cont.)

- Based on a market approach (and a sales comparison method analysis), the land fair market value was \$12 million.
- Based on a cost approach (and an RCNLD method analysis), the building fair market value was \$14 million and the equipment fair market value was \$24 million.
- All of these assets (including the inventory) were appraised based on a going-concern premise of value.
- In this example, the analyst could have applied different required rates of return to each asset category.
- For example, the analyst could have applied a lower (than 15 percent) rate of return to the inventory and tangible assets. Then the analyst would have applied a higher (than 15 percent) capitalization rate as part of the goodwill valuation.



ANAV Method Illustrative Example— Tangible Asset Valuation (cont.)

- Using such a procedure, the analyst would have to ensure that the weighted average return on assets (“WARA”) equals the WACC in the CEEM analysis.
- To maintain the simplicity of this example, the analyst consistently used the 15 percent WACC as the required rate of return on all assets in this CEEM.
- Since the analyst received or performed current valuations of certain of the asset accounts, the analyst used these valuations in the ANAV method analysis.
- The analyst did not have valuations for any of the intangible assets.
- Based on the Epsilon historical cost balance sheet and the current values for the inventory and tangible assets, the analyst performed the CEEM analysis summarized in Exhibit 6.



Exhibit 6
Delta Company
Adjusted Net Asset Value Method Analysis
Intangible Value in the Nature of Goodwill
As of December 31, 2018 (in \$000s)

Capitalized Excess Earnings Method Valuation Analysis:

<u>Epsilon Account Balances</u>		Fair of Return	Required Earnings
Working Capital Assets [a]	5,000	15%	750
Property, Plant, and Equipment [b]	<u>50,000</u>	15%	<u>7,500</u>
Total Assets	55,000		8,250
<u>Excess Earnings Analysis</u>			
Epsilon Next Period Normalized Earnings	9,000		
- Epsilon Required Earnings	<u>8,250</u>		
= Epsilon Excess Earnings	750		
<u>Capitalized Excess Earnings Analysis</u>			
Epsilon Excess Earnings	750		
÷ Direct Capitalization Rate	<u>15%</u>		
= Capitalized Excess Earnings	<u>5,000</u>		
Intangible Value in the Nature of Goodwill:	<u>5,000</u>		

[a] Working capital includes \$11 million of current assets less \$6 million of current liabilities.

[b] Property, plant, and equipment includes: \$12 million of land, \$14 million of buildings, and \$24 million of equipment.



Tangible Asset Valuation (cont.)

- The analyst prepared the ANAV method balance sheet as of December 31, 2018.
- The analyst adjusted the GAAP-based balance sheet for both (1) the results of the separately valued individual asset accounts and (2) the conclusions of the CEEM analysis.
- The Epsilon ANAV balance sheet is presented in Exhibit 7.



Exhibit 7
Epsilon Company
Asset-Based Approach Business Valuation
Adjusted Net Asset Value Method Analysis
As of December 31, 2018 (in \$000s)

<u>Assets:</u>		<u>Liabilities and Owners' Equity:</u>	
<u>Current Assets:</u>		<u>Current Liabilities:</u>	
Cash	2,000	Accounts Payable	2,000
Accounts Receivable	3,000	Wages Payable	2,000
Inventory	<u>6,000</u>	Taxes Payable	<u>2,000</u>
Total Current Assets	11,000	Total Current Liabilities	6,000
 <u>Property, Plant, and Equipment:</u>		 <u>Long-Term Liabilities:</u>	
Land	12,000	Notes Payable	14,000
Buildings	14,000	Mortgages Payable	<u>10,000</u>
Equipment	<u>24,000</u>	Total Long-Term Liabilities	24,000
Property, Plant, and Equipment	<u>50,000</u>		
 <u>Intangible Assets:</u>		 <u>Owners' Equity:</u>	
Intangible Value in the Nature of Goodwill	<u>5,000</u>	Total Owners' Equity	<u>36,000</u>
 Total Assets:	 <u>66,000</u>	 Total Liabilities and Owners' Equity:	 <u>66,000</u>



ANAV Method Illustrative Example— Negative Goodwill

- The analyst is again retained to estimate the value of 100 percent of the Zeta Company (“Zeta”) owners’ equity as of December 31, 2018.
- The assignment calls for a fair market value standard of value and a marketable, controlling ownership interest level of value.
- The Zeta December 31, 2018, historical cost basis balance sheet is the same as the Delta balance sheet.
- The analyst performs a due diligence and concludes the same valuation variable used in the prior two examples with regard to WACC, expected long-term growth rate in excess earnings, and direct capitalization rate.



ANAV Method Illustrative Example— Negative Goodwill (cont.)

- The analyst has the opportunity to discretely appraise certain asset categories.
- Using the same market approach analysis, the analyst values the inventory at \$6,000.
- Management provides the current fair market value appraisals of the property, plant, and equipment.
- The land is valued at \$12,000 using the market approach, and the building is valued at \$14,000 using the cost approach.
- This time, management provides the analyst with a \$30,000 appraisal for the Zeta equipment.



ANAV Method Illustrative Example— Negative Goodwill (cont.)

- That \$30,000 fair market value conclusion is based on a cost approach and an RCNLD method analysis.
- The analyst used the inventory and the tangible asset valuations in the ANAV method.
- The analyst did not have access to any intangible asset valuations.
- Based on the historical cost balance sheet and the current valuations for the inventory and tangible assets, the analyst performed the CEEM analysis in Exhibit 8.



Exhibit 8
Delta Company
Adjusted Net Asset Value Method Analysis
Intangible Value in the Nature of Goodwill
As of December 31, 2018 (in \$000s)

Capitalized Excess Earnings Method Valuation Analysis:

Zeta Account Balances		Fair of Return	Required Earnings
Working Capital Assets [a]	5,000	15%	750
Property, Plant, and Equipment [b]	<u>56,000</u>	15%	<u>8,400</u>
Total Assets	61,000		9,150
Excess Earnings Analysis			
Zeta Next Period Normalized Earnings	9,000		
- Zeta Required Earnings	<u>9,150</u>		
= Zeta Income Shortfall	(150)		
Capitalized Excess Earnings Analysis			
Zeta Income Shortfall	(150)		
÷ Direct Capitalization Rate	<u>15%</u>		
= Capitalized Income Shortfall	<u>(1,000)</u>		
Intangible Value in the Nature of Goodwill:	<u>(1,000)</u>		

[a] Working capital includes \$11 million of current assets less \$6 million of current liabilities.

[b] Property, plant, and equipment includes: \$12 million of land, \$14 million of buildings, and \$30 million of equipment.



ANAV Method Illustrative Example— Negative Goodwill (cont.)

- Since the “excess earnings” results in an income shortfall, the CEEM indicates the existence of economic obsolescence.
- The analyst reflects the economic obsolescence by recognizing a proportional value decrease in all tangible assets and intangible assets that were valued by the cost approach.
- In the Zeta valuation, none of the working capital accounts are valued by reference to the cost approach.
- No identifiable intangible assets were valued in this example.
- Therefore, the analyst considered the Zeta tangible asset accounts.



ANAV Method Illustrative Example— Negative Goodwill (cont.)

- The land was valued by reference to the market approach, so no economic obsolescence adjustment is necessary.
- The building and equipment were both valued by the cost approach and the RCNLD method.
- The analyst will have to make an economic obsolescence adjustment to the building and equipment values.
- This economic obsolescence adjustment is summarized in Exhibit 9.



Exhibit 9
Zeta Company
Recognition of Economic Obsolescence
As of December 31, 2018 (in \$000s)

Accounts Valued by the Cost Approach	RCNLD Indication	Economic Obsolescence Amount	Economic Obsolescence %	Economic Obsolescence by Asset	Fair Market Value
Buildings	14,000		2.3 [a]	(300)	13,700
Equipment	<u>30,000</u>	—	2.3 [a]	<u>(700)</u>	<u>29,300</u>
Total Cost Approach Assets	<u>44,000</u>	<u>(1,000)</u>	2.3 [a]	<u>(1,000)</u>	<u>43,000</u>

[a] The 2.3 percent economic obsolescence percent is calculated as \$1 million economic obsolescence \$44 million total RCNLD.



ANAV Method Illustrative Example— Negative Goodwill (cont.)

- Based on the allocation of economic obsolescence, the final fair market value for the buildings is \$13,700 and for the equipment is \$29,300.
- The analyst uses these values in the ANAV analysis.
- After this recognition of economic obsolescence, the CEEM analysis will conclude no positive goodwill—and no negative goodwill.
- Finally, the analyst prepared the ANAV method balance sheet as of the December 31, 2018.
- The analyst adjusted the GAAP-based balance sheet for both (1) the results of the separately valued individual asset accounts and (2) the conclusion of the CEEM analysis (requiring an adjustment for economic obsolescence).
- The Zeta ANAV method balance sheet is presented in Exhibit 10.



Exhibit 10
Zeta Company
Asset-Based Approach Business Valuation
Adjusted Net Asset Value Method Analysis
As of December 31, 2018 (in \$000s)

<u>Assets:</u>		<u>Liabilities and Owners' Equity:</u>	
<u>Current Assets:</u>		<u>Current Liabilities:</u>	
Cash	2,000	Accounts Payable	2,000
Accounts Receivable	3,000	Wages Payable	2,000
Inventory	<u>6,000</u>	Taxes Payable	<u>2,000</u>
Total Current Assets	11,000	Total Current Liabilities	6,000
		<u>Long-Term Liabilities:</u>	
<u>Property, Plant, and Equipment:</u>		Notes Payable	14,000
Land	12,000	Mortgages Payable	<u>10,000</u>
Buildings	13,700	Total Long-Term Liabilities	24,000
Equipment	<u>29,300</u>		
Property, Plant, and Equipment	<u>55,000</u>	<u>Owners' Equity:</u>	
		Total Owners' Equity	<u>36,000</u>
<u>Total Assets:</u>	<u>66,000</u>	<u>Total Liabilities and Owners' Equity:</u>	<u>66,000</u>



Asset-Based Approach Take-Aways

- The asset-based approach may be used to value both operating companies and investment (or asset-holding) companies.
- The asset-based approach may be used to value companies on either a going-concern basis or a liquidation basis.
- The asset-based approach may be applied to value either (1) all company tangible assets and intangible assets individually (the AA method) or (2) all company tangible assets and intangible asset values collectively (the ANAV method).
- Analysts can apply cost approach or market approach or income approach property valuation methods to value the company's tangible assets and intangible assets.



Asset-Based Approach Take-Aways (cont.)

- Depending on which property valuation approach is applied, the analyst may (or may not) have to consider the transaction-related income tax liability and selling expenses in the analysis.
- Depending on how the property valuation approaches are applied, the analysis conclusion will indicate either a going-concern value or a liquidation value.
- Analysts should consider the revaluation of the company recorded liabilities and contingent liabilities as part of the valuation.
- If applied correctly—and with consistent valuation variables—both the AA method and the ANAV method should conclude about the same value for the same company.



Asset-Based Approach Summary and Conclusion

- The asset-based approach is a generally accepted business valuation approach.
- The asset-based approach is not the cost approach. The cost approach is a generally accepted property valuation approach.
- In the asset-based approach, analysts often use the cost approach to value individual tangible assets or intangible assets.



Asset-Based Approach Summary and Conclusion (cont.)

- Since the values of the tangible assets and intangible assets are normally based on a value in continued use premise of value, the asset-based approach normally concludes a going-concern value.
- Normally, the asset-based approach concludes a marketable, controlling ownership interest level of value.
- If the assignment calls for a nonmarketable, noncontrolling ownership interest level of value, the analyst may have to apply a discount for lack of marketability and a discount for lack of control.
- The asset-based approach may be used when there are data constraints preventing the application of income approach or market approach business valuation methods.



Asset-Based Approach Summary and Conclusion (cont.)

- The asset-based approach may be used to provide a confirmatory value indication to income approach and market approach value indications—particularly when the issue of individual asset values is important to the valuation assignment.
- Questions and discussion.





Thank you