Purchase Price Allocation 101

PRESENTATION BY:
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PPA 101 – Agenda Outline

- **Overview (~ 1.0 to 1.5 hours)**
  - Introduction to Purchase Price Allocation
    - Background and Purpose
    - Purchase Price Allocation Process
    - Appropriate valuation methodologies
    - Diagnostic tools (IRR, WARA)

- **Case Study (~ 1.0 to 1.5 hours)**
  - Acquisition of Potato Chips Manufacturer/Seller (Cheesy Chips)
    - Valuation of customers and trademarks
    - Customer retention rate discussion and cost to service support
    - Analysis of selected royalty rate (benchmarks and profit split analysis)
    - Discussion of IRR analysis and market participant assumptions
    - Use of WARA relative to WACC and IRR

- **Q & A (time permitting)**
General Overview

- In a nutshell, what is It?
- Allocate purchase price paid for acquired company to its tangible and intangible assets
- Deal-based
- Purpose – Financial reporting
- Regulation/Oversight – SEC
- Guidelines – SFAS 141, 141(R), 142, 157
  - SFAS 141, 142 Effective Mid-2001;
  - 141(R) Effective in 2009;
  - SFAS 157 Effective 2008/2009 (based on circumstances)
Why PPA Valuations Matter to Companies

- Most intangible assets are amortized over their expected lives; this expense can have a major impact on reported earnings

- Goodwill typically tested for impairment on an annual basis following the acquisition
Valuation Process – Overview

- Determine purchase price and total asset base
- Identify components of total asset base
  - Tangible assets
  - Intangible assets
  - Goodwill (remainder)
- Allocate value to company’s asset components
- Reconciliation of asset conclusions
- This analysis focuses on intangible asset valuation
Valuation Process – Purchase Price

- To know what to allocate, the purchase price must be identified.
- Focus on market value of acquired company’s equity and debt assumed, or market value of invested capital.
- Non-debt liabilities added to MVIC of acquired company, to arrive at its total asset base, or total consideration.
- New rules (SFAS 141R) impact on purchase price in 2009:
  - Transaction costs no longer part of purchase price.
  - Contingent payments valued as part of purchase price.
  - In some cases, contingent liabilities will be valued.
**Calculation of Purchase Price**

*(Numbers in $US thousands)*

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock Consideration</td>
<td>40,000</td>
</tr>
<tr>
<td>Cash Consideration</td>
<td>125,000</td>
</tr>
<tr>
<td>Contingent Earnout Payments</td>
<td>10,000</td>
</tr>
<tr>
<td><strong>Total Equity Purchase Price</strong></td>
<td><strong>175,000</strong></td>
</tr>
<tr>
<td>Plus: Assumed Debt</td>
<td>-</td>
</tr>
<tr>
<td><strong>Market Value of Invested Capital</strong></td>
<td><strong>175,000</strong></td>
</tr>
<tr>
<td>Plus: Assumed Liabilities *</td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>36,680</td>
</tr>
<tr>
<td>Accrued Expenses/Other</td>
<td>14,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50,680</strong></td>
</tr>
<tr>
<td><strong>Total Purchase Consideration/Total Assets</strong></td>
<td><strong>225,680</strong></td>
</tr>
</tbody>
</table>
Identify Components of Value

- Next Step - identify components that make up total asset base, in this case, $225.68 million

- Components of value
  - Tangible assets
    - Value typically estimated by client or through property appraisals

- Intangible Assets
  - Separately identifiable assets
    - Remainder = Goodwill
Identification of Intangible Assets

- There are many types of intangible assets
- A typical case may involve half a dozen intangibles identified and valued
- Certain intangibles dictated by industry
  - Recipes valued in food industry
  - Web site members valued in internet industry
  - Production processes and patterns valued for manufacturing companies
  - Subscribers for magazines/newspapers
  - FCC licenses for television stations or telecom
Identification of Intangible Assets (cont.)

- Common Intangible Assets Include
  - Trademarks/names (e.g. Coca-Cola, IBM)
  - Customer Contracts & Relationships
  - Technology
  - Workforce
  - Patents
  - Databases
  - Non-compete Agreements
  - In-process Research and Development ("IPR&D")
  - Goodwill
Identification of Intangible Assets (cont.)

- After identification, intangible assets must be classified into two categories:
  - “Identifiable” intangible assets separable from goodwill
  - Intangible assets not separable from goodwill
- Distinction made between assets that have a clearer basis of value vs. assets that have a more ambiguous basis of value
Identification of Intangible Assets (cont.)

- According to accounting guidelines, an intangible asset is identifiable/separate from goodwill if:

  It arises from contractual or legal rights
  - Patents
  - Trademarks
  - Customer Contracts

  It can be sold, transferred, or licensed separately
  - Technology
  - Customer list
  - Not workforce

Note: SFAS 141(R) has many examples of identifiable intangibles

Source: SFAS 141(R)
Standards of Value

- Standard of value for purchase price allocations for financial reporting is **fair value**
- For a comprehensive overview of fair value, please refer to SFAS 157
- With a few exceptions, fair value is fairly similar to the fair market value standard for tax purposes
- Fair value focuses on an exit value concept, i.e. what a market participant would pay to buy an asset or transfer a liability
- For purchase price allocations, **must exclude inputs that are unique to a specific buyer and not applicable to other market participants.**
Valuation Approaches

- **Income Approach**
  - Project cash flows attributable to asset over its useful life
  - Similar to discounted cash flow analysis
  - Methods include excess earnings method and relief from royalty method

- **Market Approach**
  - Identify transactions of similar assets and use as a guideline to value

- **Cost Approach**
  - Cost to replace an asset, net of obsolescence

- See SFAS 157 for full definitions of these approaches
Income Approach – Excess Earnings

- Project future cash flows attributable to asset over estimated economic life
- Make sure that charges are taken for assets that contribute to the stream of cash flows generated
  - Typically charges calculated as a percentage of sales
- Develop a weighted average cost of capital for the asset
- Projected cash flow streams are discounted to present @ WACC Rate
- To this value, a tax amortization benefit (“TAB”) factor is applied
  - Present value of ability to amortize an intangible asset over a 15-year period, for tax purposes
### Excess Earnings Method - Example

(Numbers in $US thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>Existing Customer Revenue</th>
<th>Times: Retention Rate</th>
<th>Net Customer Revenue</th>
<th>Less: Cost to Service Existing Customers</th>
<th>Cost to Service Margin (4)</th>
<th>Pretax Income</th>
<th>Less: Provision for Taxes</th>
<th>Net Profit</th>
<th>Less: Contributory Asset Charges</th>
<th>%Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>267,750</td>
<td>0.9500</td>
<td>254,363</td>
<td>(234,014)</td>
<td>92.0%</td>
<td>20,349</td>
<td>(8,140)</td>
<td>12,209</td>
<td>Working Capital</td>
<td>0.50%</td>
</tr>
<tr>
<td></td>
<td>273,105</td>
<td>0.8550</td>
<td>233,305</td>
<td>(214,824)</td>
<td>92.0%</td>
<td>18,680</td>
<td>(7,472)</td>
<td>11,208</td>
<td>Fixed Assets</td>
<td>0.40%</td>
</tr>
<tr>
<td></td>
<td>278,567</td>
<td>0.7695</td>
<td>214,357</td>
<td>(197,209)</td>
<td>92.0%</td>
<td>17,149</td>
<td>(6,859)</td>
<td>10,289</td>
<td>Trademark</td>
<td>1.20%</td>
</tr>
<tr>
<td></td>
<td>284,138</td>
<td>0.6926</td>
<td>196,780</td>
<td>(181,038)</td>
<td>92.0%</td>
<td>15,742</td>
<td>(6,297)</td>
<td>9,445</td>
<td>Workforce in Place</td>
<td>0.10%</td>
</tr>
<tr>
<td></td>
<td>289,821</td>
<td>0.6233</td>
<td>180,644</td>
<td>(166,193)</td>
<td>92.0%</td>
<td>14,452</td>
<td>(5,781)</td>
<td>8,671</td>
<td>Net Cash Flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>295,618</td>
<td>0.5610</td>
<td>165,831</td>
<td>(152,565)</td>
<td>92.0%</td>
<td>13,267</td>
<td>(5,307)</td>
<td>7,960</td>
<td>Period</td>
<td></td>
</tr>
<tr>
<td></td>
<td>301,530</td>
<td>0.5049</td>
<td>152,233</td>
<td>(140,054)</td>
<td></td>
<td></td>
<td></td>
<td>7,307</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
<td>0.5000</td>
<td>1.5000</td>
<td>2.5000</td>
<td>3.5000</td>
<td>4.5000</td>
<td>5.5000</td>
<td>6.5000</td>
</tr>
<tr>
<td>Times: Present Value Factor</td>
<td>0.9449</td>
<td>0.8437</td>
<td>0.7533</td>
<td>0.6726</td>
<td>0.6005</td>
<td>0.5362</td>
<td>0.4787</td>
</tr>
<tr>
<td>Present Value of Cash Flow</td>
<td>6,249</td>
<td>5,122</td>
<td>4,198</td>
<td>3,441</td>
<td>2,820</td>
<td>2,312</td>
<td>1,895</td>
</tr>
</tbody>
</table>

Sum of Discounted Cash Flows: 32,894
Times: Tax Amort. Benefit Factor: 1.2379
Value of Customer Relationships: 40,722

Value of Customer Relationships: $41,000
Income Approach – Relief from Royalty

- Estimates value for asset, based on the cost savings realized through ownership (vs. paying licensing fees)
- Cost savings determined, based on the royalty rate a licensor would pay for the asset
- Commonly used for trademarks/names and sometimes technology/patents
- Estimation of an appropriate royalty rate critical to the analysis
## Relief from Royalty Method - Example

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Total Company Revenue</td>
<td>270,000</td>
<td>302,400</td>
<td>338,688</td>
<td>372,557</td>
<td>409,812</td>
<td>426,205</td>
<td></td>
</tr>
<tr>
<td>Times: % Attributable to Trademarks</td>
<td>70.0%</td>
<td>70.0%</td>
<td>70.0%</td>
<td>70.0%</td>
<td>70.0%</td>
<td>70.0%</td>
<td></td>
</tr>
<tr>
<td>Projected Revenue Attributable to Trade names</td>
<td>189,000</td>
<td>211,680</td>
<td>237,082</td>
<td>260,790</td>
<td>286,869</td>
<td>298,343</td>
<td></td>
</tr>
<tr>
<td>Times: Royalty Rate</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td></td>
</tr>
<tr>
<td>Company Royalty Savings</td>
<td>3,780</td>
<td>4,234</td>
<td>4,742</td>
<td>5,216</td>
<td>5,737</td>
<td>5,967</td>
<td></td>
</tr>
<tr>
<td>Less: Trademarks Maintenance Expense</td>
<td>(100)</td>
<td>(103)</td>
<td>(106)</td>
<td>(109)</td>
<td>(113)</td>
<td>(116)</td>
<td></td>
</tr>
<tr>
<td>Net Pretax Royalty Savings</td>
<td>3,680</td>
<td>4,131</td>
<td>4,636</td>
<td>5,107</td>
<td>5,625</td>
<td>5,851</td>
<td></td>
</tr>
<tr>
<td>Less: Provision for Taxes</td>
<td>(1,472)</td>
<td>(1,652)</td>
<td>(1,854)</td>
<td>(2,043)</td>
<td>(2,250)</td>
<td>(2,340)</td>
<td></td>
</tr>
<tr>
<td>After-Tax Royalty Income</td>
<td>2,208</td>
<td>2,478</td>
<td>2,781</td>
<td>3,064</td>
<td>3,375</td>
<td>3,511</td>
<td></td>
</tr>
<tr>
<td>Times: Partial Period Factor</td>
<td>0.5041</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discounted After-Tax Royalty Income</td>
<td>1,113</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Period (Mid-Period)</td>
<td>0.2521</td>
<td>1.0041</td>
<td>2.0041</td>
<td>3.0041</td>
<td>4.0041</td>
<td>5.0041</td>
<td></td>
</tr>
<tr>
<td>Times: Discount Factor</td>
<td>0.9718</td>
<td>0.8924</td>
<td>0.7968</td>
<td>0.7114</td>
<td>0.6352</td>
<td>0.5672</td>
<td></td>
</tr>
<tr>
<td>Discounted After-Tax Royalty Income</td>
<td>1,082</td>
<td>2,212</td>
<td>2,216</td>
<td>2,180</td>
<td>2,144</td>
<td>1,991</td>
<td></td>
</tr>
<tr>
<td>Sum of Discounted Royalty Streams</td>
<td>40,477</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Times: Tax Amort. Benefit Factor</td>
<td>1.2379</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of Trademarks</td>
<td>50,108</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of Trademarks, Rounded:</td>
<td>$50,100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Determining Royalty Rates

- Sources of guideline royalty rates include
  - SEC filings
  - Online databases (e.g., RoyaltySource, RoyaltyStat)
  - Subject company licensing transactions
  - Previous engagements

- Profit splitting analysis
  - Rule of thumb: one quarter to one third of operating profit reasonable proxy for a royalty rate to pay
  - Often performed as a reasonableness check
Assessing Guideline Royalty Rates

- **Comparability**
  - Type of Product(s)
  - Profit margin of Product(s)
  - Date of Transaction

- **Exclusive vs. non-exclusive**

- **Remaining life of intangible and term of agreement**

- **Arm’s length transaction? May not be, e.g. could be**
  - Legal settlement
  - Between related parties
  - Within same company between different countries
  - Beware of references to articles!

- **Geographic region**

- **Is transaction for bundled IP vs. single item being valued?**
Asset Life (Economic)

- Needed for income approach projection period

- Definite (amortized) vs. indefinite (not amortized) lives
  - Definite lives assume a discrete period modeled
  - Indefinite lives assume a discrete period plus a horizon value modeled
  - See SFAS 142 for more information on definite vs. indefinite

- Factors to consider
  - Mathematical calculation based on historical attrition patterns
  - Consideration of market, economic, competitive, etc. factors
  - Discussions with management
  - Benchmarking (what are other companies reporting)
  - Final conclusion for accounting lives responsibility of management

- Indefinite life not appropriate for most intangibles other than goodwill.
  - Exceptions to the rule do exist, for example many consumer product trademarks
Per SFAS 142, factors to consider in determining include:

- The expected use of the asset by the entity
- The expected useful life of another asset or a group of assets to which the useful life of the intangible asset may relate
- Any legal, regulatory, or contractual provisions that may limit the useful life
- Any legal, regulatory, or contractual provisions that enable renewal or extension of the asset’s legal or contractual life without substantial cost (provided there is evidence to support renewal or extension and renewal or extension can be accomplished without material modifications of the existing terms and conditions)
- The effects of obsolescence, demand, competition, and other economic factors (such as the stability of the industry, known technological advances, legislative action that results in an uncertain or changing regulatory environment, and expected changes in distribution channels)
- The level of maintenance expenditures required to obtain the expected future cash flows from the asset (for example, a material level of required maintenance in relation to the carrying amount of the asset may suggest a very limited useful life)
Cost Approach

- Cost estimated to replace asset
  - Adjustments made for obsolescence

- May be used to value:
  - Workforce in place
  - Internally developed software
  - Magazine or telecom subscribers (maybe)

- Problems with Cost Approach
  - Unique attributes of asset ignored
  - May understate the asset’s value
  - Validity increasingly questioned
  - May need to consider opportunity costs (cash flow lost due to time needed to recreate asset)

- Note: Tax-effecting and amortization benefit factor use subject to debate (i.e., some do it and some don’t – I do)
## Cost Approach - Example (Workforce)

(Numbers in $US thousands)

<table>
<thead>
<tr>
<th>Employee Category</th>
<th>Total Number of Employees</th>
<th>Aggregate Salary</th>
<th>Average Salary</th>
<th>Non-Salary Costs % Salary</th>
<th>Fully Burdened (FB) Salary</th>
<th>Recruitment Costs % Salary</th>
<th># Months Initial Prod.</th>
<th>% FB Salary</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive / Management</td>
<td>8</td>
<td>1,000</td>
<td>125</td>
<td>35.0%</td>
<td>1,350</td>
<td>30.0%</td>
<td>6.0</td>
<td>50%</td>
<td>169</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales and Marketing</td>
<td>10</td>
<td>800</td>
<td>80</td>
<td>35.0%</td>
<td>1,080</td>
<td>25.0%</td>
<td>6.0</td>
<td>50%</td>
<td>135</td>
</tr>
<tr>
<td>Administrative</td>
<td>12</td>
<td>600</td>
<td>50</td>
<td>20.0%</td>
<td>720</td>
<td>20.0%</td>
<td>3.0</td>
<td>60%</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing/Warehouse</td>
<td>110</td>
<td>4,000</td>
<td>36</td>
<td>20.0%</td>
<td>4,800</td>
<td>10.0%</td>
<td>3.0</td>
<td>75%</td>
<td>300</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing</td>
<td>12</td>
<td>700</td>
<td>58</td>
<td>20.0%</td>
<td>840</td>
<td>20.0%</td>
<td>3.0</td>
<td>75%</td>
<td>26</td>
</tr>
<tr>
<td>Other</td>
<td>30</td>
<td>1,200</td>
<td>40</td>
<td>20.0%</td>
<td>1,440</td>
<td>15.0%</td>
<td>3.0</td>
<td>50%</td>
<td>90</td>
</tr>
<tr>
<td>Total</td>
<td>182</td>
<td>8,300</td>
<td></td>
<td></td>
<td>10,230</td>
<td>N/A</td>
<td>1,340</td>
<td>N/A</td>
<td>756</td>
</tr>
</tbody>
</table>

Employee Replacement Costs 2,096
Less: Value of Tax Shield 40.0% (838)
After-Tax Employee Replacement Costs 1,258
Times: Tax Amortization Benefit Factor 1.2702
Value of Workforce in Place 1,597

Value of Workforce in Place, Rounded: $1,600
Market Approach

- Limited applicability, given lack of data available for intangible assets
- Examples where information could be found include FCC licenses or domain name transactions
- Useful for certain inputs, such as royalty rates used in relief from royalty method
- Given focus of SFAS 157 on market-based guidelines and inputs, important to use market data when possible, with the hopes of achieving the highest level of value/inputs possible.
Remaining Step - Goodwill

- Goodwill = Amount paid in excess of identified assets
- Value Goodwill = Total asset base - identified assets
- Goodwill is the value remaining, or the “plug number”
- Reasons for goodwill include expected synergies, future assets, assets not identified, mgmt. hubris, and other factors difficult to quantify
- Negative goodwill: Value assets>purchase price
  - Starting in 2009 will be booked as an extraordinary gain on the income statement
  - (Previously long-term assets were written down on a pro rata basis to get goodwill value to zero)
Goodwill Cash Flows Increase Over Time
## Example – Summary of Values

(Numbers in $US thousands)

<table>
<thead>
<tr>
<th>Balance Sheet Item</th>
<th>Fair Value</th>
<th>% Total Assets</th>
<th>Discount Rate</th>
<th>Valuation Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Tangible Assets *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Assets</td>
<td>80,767</td>
<td>35.8%</td>
<td>-</td>
<td>Per Management</td>
</tr>
<tr>
<td>Net Property and Equipment</td>
<td>15,000</td>
<td>6.6%</td>
<td>-</td>
<td>Per Management</td>
</tr>
<tr>
<td>Other Long-Term Assets</td>
<td>500</td>
<td>0.2%</td>
<td>-</td>
<td>Per Management</td>
</tr>
<tr>
<td>**Total *</td>
<td>96,267</td>
<td>42.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intangible Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Relationships</td>
<td>41,000</td>
<td>18.2%</td>
<td>12.0%</td>
<td>Income</td>
</tr>
<tr>
<td>Trademarks</td>
<td>50,100</td>
<td>22.2%</td>
<td>12.0%</td>
<td>Income</td>
</tr>
<tr>
<td><strong>Total Intangible Assets (Excluding Goodwill)</strong></td>
<td>91,100</td>
<td>40.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Implied Goodwill *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workforce in Place</td>
<td>1,600</td>
<td>0.7%</td>
<td>10.0%</td>
<td>Cost</td>
</tr>
<tr>
<td>Implied Residual Goodwill *</td>
<td>36,713</td>
<td>16.3%</td>
<td>15.3%</td>
<td>Remainder</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38,313</td>
<td>17.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Total Assets Acquired *</td>
<td>225,680</td>
<td>100.0%</td>
<td>-</td>
<td>Sum Value</td>
</tr>
<tr>
<td>Less: Assumed Liabilities (Excluding Debt) *</td>
<td>(50,680)</td>
<td>-22.5%</td>
<td>-</td>
<td>Per Management</td>
</tr>
<tr>
<td><strong>Market Value of Invested Capital</strong></td>
<td>175,000</td>
<td>77.5%</td>
<td>11.0%</td>
<td></td>
</tr>
<tr>
<td>Less: Debt Outstanding *</td>
<td></td>
<td>0.0%</td>
<td></td>
<td>Per Management</td>
</tr>
<tr>
<td><strong>Company Equity Value (Purchase Price)</strong></td>
<td>175,000</td>
<td>77.5%</td>
<td>11.0%</td>
<td>Per Management</td>
</tr>
</tbody>
</table>
Supplemental Analyses – Rates of Return

- **Company and intangible WACC rates**
  - Typically a rate is developed independently for the Company, and adjustments are made to this rate to reflect risks inherent to the intangibles

- **Transaction Internal Rate of Return**
  - Compared to independently developed WACC to test for reasonableness
  - Should exclude buyer-specific synergies

- **Weighted Average Return on Assets ("WARA")**
  - Determine goodwill rate required for WARA to equal company rate
  - Typically goodwill rate expected to be highest rate of return

- **Many auditors expect to see a gap of no more than 1% between the WACC and IRR**
  - Otherwise, a detailed explanation is required as to the gap
  - Sometimes rates will not converge (for example, with a bargain purchase or when too high a price is paid)
Supplemental Analyses – TAB

- TAB represents ability to amortize intangible on a straight line basis over 15 years for tax purposes.
- Can be exceptions – See IRC Section 197 for more details.
- Doesn’t matter if acquisition was an equity deal or an asset deal, either way you still apply a TAB to the value of the intangible asset.
- Remember, 15 year period is based on treatment for tax purposes (even goodwill is amortized for tax purposes).
- Rules/TABs often vary for acquisitions in foreign countries.
**Supplemental Analyses – TAB**

- **Factor calculation assuming 12% WACC/40% tax rate:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Discount Period</th>
<th>Mid-Year Discount Factor</th>
<th>Amortization Benefit/Year</th>
<th>Present Value of Amortization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.5000</td>
<td>0.9449</td>
<td>2.6667</td>
<td>2.5198</td>
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<td>0.8437</td>
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<td>0.7533</td>
<td>2.6667</td>
<td>2.0087</td>
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<td>3.5000</td>
<td>0.6726</td>
<td>2.6667</td>
<td>1.7935</td>
</tr>
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<td>5</td>
<td>4.5000</td>
<td>0.6005</td>
<td>2.6667</td>
<td>1.6014</td>
</tr>
<tr>
<td>6</td>
<td>5.5000</td>
<td>0.5362</td>
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<td>1.4298</td>
</tr>
<tr>
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<td>6.5000</td>
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<td>1.2766</td>
</tr>
<tr>
<td>8</td>
<td>7.5000</td>
<td>0.4274</td>
<td>2.6667</td>
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</tr>
<tr>
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<td>8.5000</td>
<td>0.3816</td>
<td>2.6667</td>
<td>1.0177</td>
</tr>
<tr>
<td>10</td>
<td>9.5000</td>
<td>0.3407</td>
<td>2.6667</td>
<td>0.9087</td>
</tr>
<tr>
<td>11</td>
<td>10.5000</td>
<td>0.3042</td>
<td>2.6667</td>
<td>0.8113</td>
</tr>
<tr>
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<td>11.5000</td>
<td>0.2716</td>
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<td>0.7244</td>
</tr>
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<td>0.2425</td>
<td>2.6667</td>
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<tr>
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<td>13.5000</td>
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<td>2.6667</td>
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<tr>
<td>15</td>
<td>14.5000</td>
<td>0.1933</td>
<td>2.6667</td>
<td>0.5156</td>
</tr>
</tbody>
</table>

Total: 40.00 19.22

Base Value 100.00

Sample Tax Amortization Premium 0.2379 [1]/[2]

Supplemental Analyses - CACs

- Represent contribution of other assets to projected cash flow streams

- Must account for “return on” and “return of” asset
  - Often the return on is calculated by the appraiser, and the return of is considered to be included in the projected expenses for the intangible/company
  - Return of represents cost to replenish; return on represents holding costs (another way to think of this: Return on = interest, return of = principal)
  - Land and working capital always get “return on” charges only as these assets do not deteriorate

- When royalty rate used to value an asset, often this rate can be used as a proxy for the charge on the asset
Supplemental Analyses – CACs (cont.)

- Some guidance is available on calculating charges

    > Still out in draft with potential for changes

  - AICPA Practice Aid Series, “Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices and Pharmaceutical Industries”
Here are a few tips

❖ Understanding the deal value drivers critical; do so through
  ▶ Discussions with management (of acquirer and target)
  ▶ Review of due diligence documents including board presentations
  ▶ Review of press releases

❖ Auditor Reviews
  ▶ Often the work gets reviewed by a valuation specialist at the accounting firm
  ▶ It is very easy to become defensive when answering their questions
  ▶ Try to be cooperative and open-minded, as it allows for the opportunity to learn best practices and is more likely lead to future referrals

❖ Outline your game plan in advance
  Doing so will avoid difficulties down the road

❖ Have as much support as possible for critical inputs, e.g. attrition rates, projected growth/profit margins, etc.
Case Study

- **Target Company:** Cheesy Chips, Inc.
- **Business:** Snack Products
- **Acquisition Date:** June 30, 2008
- **Type of Transaction:** Purchase of Equity
- **Scope of Assignment:** Valuation of identifiable intangible assets pursuant to SFAS 141.
  
  (In this case, all other values estimated by management or provided by other third party appraisers).

- Company manufacturers some product and uses co-packers for some production

- 30% of sales private label
Thank You!

- Please feel free to ask any questions after the session or you can contact me:

  Phone: 212-714-0122 (w)
  E-mail: billj@empireval.com