AICPA® Fair Value Measurement

QUICK REFERENCE GUIDE

TO VALUING ASSETS IN BUSINESS COMBINATIONS

Quick Reference Guide to Valuing Assets in Business Combinations

Business combinations require specific financial reporting procedures. Companies with GAAP-based financial statements must comply with the guidance set forth in FASB Accounting Standards Codification (ASC) 805: *Business Combinations*, formerly SFAS 141R, recognizing and allocating all identifiable assets acquired, liabilities assumed and non-controlling interests in an acquisition.

This guide is intended to serve as a quick reference to the allocation of total consideration transferred in a business combination under ASC 805. It discusses business combinations, fair value assumptions, valuation of tangible assets and identifiable intangible assets, and the allocation of the consideration to the identifiable assets acquired, liabilities assumed and non-controlling interests in an acquisition.

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Overview of ASC 805: Business Combinations

FASB ASC 805: *Business Combinations* describes the proper accounting treatment to be used by an acquirer in business combinations. ASC 805:

- Applies to business combinations with an acquisition date on or after the beginning of the first annual reporting period beginning on or after Dec. 15, 2008 (Dec. 15, 2009, for acquisitions by not-for-profit entities)
- Provides a broader definition of a business
- Requires the use of the acquisition method
- Recognizes assets acquired and liabilities assumed at fair value as defined in ASC 820: *Fair Value Measurement*

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ASC 805-10-20 Defines a ***Business Combination*** as:

"A transaction or other event in which an acquirer obtains control of one or more businesses."

For US GAAP, the general rule is that one reporting entity that directly or indirectly holds more than 50% of the outstanding voting shares of another entity has control (ASC 810-10-15-8). The power to control may also exist with a lesser percentage of ownership, for example, by contract, lease, agreement with other stockholders, or by court decree.

ASC 805-10-20 Defines a ***Business*** as:

"An integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return."

A business consists of inputs, processes and outputs. A company applies processes to its inputs to generate outputs desired by the market. When determining if a group of assets and activities is a business, one must determine whether or not the group of assets is capable of being conducted and managed as a business. A business need not include all of the inputs or processes that the seller used in operating the business if market participants are capable of acquiring the business and continuing to produce outputs (for example, by integrating the business with their own inputs and processes).

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Acquisition Method

An entity shall account for each business combination by applying the acquisition method. Applying the acquisition method requires:

- Identifying the acquirer
- Determining the acquisition date
- Determining the consideration transferred
- Recognizing and measuring the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree
- Recognizing and measuring goodwill or a gain from a bargain purchase

The acquirer must obtain the necessary information to identify and measure the above information within a measurement period, typically less than one year. During the measurement period, adjustments are made to goodwill. After the measurement period, adjustments should only be made to correct an error.

The acquisition date is defined as the date the acquirer obtains control of the acquiree, which typically is the closing date.

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Allocation of Assets and Liabilities

ASC 805-20-25-1 requires that all identifiable assets and liabilities acquired, including identifiable intangible assets, be assigned a portion of the purchase price based on their fair values.

The value of the business acquired usually is measured as the sum of the acquisition-date values (measured at fair value with a few exceptions) of the following:

- Consideration transferred for the acquiree
- Equity interests in the acquiree held by the acquirer immediately before the acquisition date (for an acquisition achieved in stages, also known as a step acquisition)
- Non-controlling interests in the acquiree held by third parties (in a partially owned subsidiary)

Business Combination Elements

Acquisition Price (ASC 805-30-30-7)	Acquisition Related Costs	
	To Be Expensed:	**Not to Be Expensed:**
▶ Cash	▶ Investment banking	▶ Registering and issuing securities
▶ Equity securities	▶ Legal	▶ Charged to APIC
▶ Debt securities	▶ Accounting	
▶ Complex transactions	▶ Valuation services	
• Debt or convertible debt securities with detachable warrants	▶ Finder fees	
• Contingent consideration		
• Liabilities assumed		

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Overview of ASC 820: *Fair Value Measurement*

Fair value under FASB ASC 820: *Fair Value Measurement* emphasizes market participant assumptions and exit values and is defined as:

"The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

- Fair value assumes an orderly transaction that assumes exposure to the market for a period prior to the measurement date to allow for usual and customary marketing activities for transactions involving such assets or liabilities
- Objective is to determine the *exit price* that occurs in the principal or most advantageous market from the seller's perspective and is defined as "the price that would be received to sell an asset or paid to transfer a liability"
- May be different than the entry price (the price paid to acquire the asset or received to assume the liability)

Highest and Best Use — A fair value measurement assumes the highest and best use of the asset by market participants, considering the use of the asset that is physically possible, legally permissible, and financially feasible at the measurement date. In broad terms, highest and best use refers to the use of an asset by market participants that would maximize the value of the asset or the group of assets within which the asset would be used.

Highest and best use is determined based on the use of the asset by the market participants, even if the intended use of the asset by the reporting entity is different. The asset must be valued based on whether its highest best use is "in use" or "in exchange."

- **In use** — The maximum value of the asset is in combination with other assets as a group
- **In exchange** — The maximum value of the asset is when it is on a stand-alone basis

Synergies — Fair value rules state that buyer-specific synergies be excluded from the calculation of value unless the synergies could be sustained at the market participant level. In that case, they would be included in the calculation.

Market Participants Assumptions — ASC 820 defines market participants as buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

- Independent of the reporting entity (that is, they are not related parties)
- Knowledgeable, having reasonable understanding about the asset or liability and the transaction based on all available information, including information that might be obtained through due diligence efforts that are usual and customary
- Able to transact for the asset or liability
- Willing to transact for the asset or liability (that is, they are motivated but not forced or otherwise compelled to do so)

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Fair Value of Tangible Assets

Tangible assets are best valued with the market or income approaches. If adequate data are not available to derive an indication of value through these methods, an appraiser may use the replacement cost method, which adjusts the original cost for changes in price level to determine its replacement cost new (RCN). The RCN is then adjusted due to physical use or functional obsolescence.

Property, Plant and Equipment (PP&E) must be recognized at fair value for current capacity. Accumulated depreciation is not carried forward. An appraiser may use the cost approach, in which a market participant would pay no more for an asset than the amount necessary to replace it to produce at current capacity.

Valuation Allowances

Separate valuation allowances are not recognized for acquired assets that are measured at fair value, including allowance for doubtful accounts and allowance for loan losses. Uncertainties regarding future cash flows are included in their fair values.

Enterprise Valuation

Enterprise Valuation represents the fair value of the acquired entity's interest bearing debt and shareholder's equity. It is a key valuation tool in measuring the fair value of assets acquired and liabilities assumed. Prospective financial information (PFI) is used to determine the enterprise value of the acquired entity.

As a helpful diagnostic, the valuation specialist would also look to the internal rate of return (IRR) implied by the acquisition (in the case of an acquisition of a business) to obtain an additional indication of the overall entity's return. After the market participant PFI has been determined (that is, entity-specific synergies have been removed), the IRR is derived by equating the sum of the prospective cash flows on a present-value basis to the consideration transferred, which assumes that the amount paid represents fair value. Because PFI generally represents the cash flows expected from the acquiree's operating assets and liabilities, the calculation of the IRR would also need to consider adjustments when non-operating assets or liabilities exist.

In the case of an acquisition of assets that do not constitute a business, a use of the IRR calculation as a diagnostic may be difficult. The IRR can also be used to assess the calculation accuracy of the Weighted Average Cost of Capital (WACC). However, valuation specialists should be careful to not use it simply to adjust the WACC calculation because under certain circumstances, such as bargain purchases, IRR and WACC may deviate from each other.

Prospective Financial Information

PFI starts with the cash flows used in determining the acquisition price of the transaction. These cash flows are adjusted to reflect market participants' assumptions, including any synergies other companies would expect to realize if they acquired the acquiree. Financial projections must also be adjusted to remove any entity specific synergies between the acquirer and acquiree.

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IRR and WACC Reconciliation

Conceptually, the IRR should be consistent with the WACC. This should be the case for all types of PFI, such as conditional, probability-weighted, and PFI with "mixed" attributes. If the implied IRR and WACC differ, it may be an indication that entity-specific synergies are included in the PFI, that cash flows are not consistent with the expectations of market participants, or that the price paid for the business was not representative of its fair value. If such a scenario exists, the valuation specialist would analyze the assumptions in the PFI to ensure that only market participant assumptions are reflected (that is, excludes entity-specific synergies or biased PFI) to derive expected cash flows for the overall entity and asset. Alternatively, if there is evidence of the price not reflecting fair value, the valuation specialist would need to impute fair value for the acquisition if that imputed value is to be used in WACC, IRR and Weighted Average Return on Assets (WARA) comparison.

The WARA analysis is applied to the fair value of the assets to generate the implied rate of return on goodwill based on the IRR. The purpose of the WARA analysis is to determine the reasonableness of the returns for the identifiable intangible assets and the implied return on goodwill.

The following summarizes the relationship between the IRR and WACC and the implications for the selection of PFI in the instance of a business combination:

- IRR **=** WACC — Indicates that the PFI likely properly reflects market participant assumptions, and the transaction consideration is likely representative of the fair value
- IRR **>** WACC — Indicates that the PFI may include some or all of the impact of entity-specific synergies, may reflect an optimistic bias, may reflect a bargain purchase, or all three
- IRR **<** WACC — Indicates that the PFI may exclude some or all of the impact of market participant synergies, may reflect a conservative bias, may reflect an overpayment, or all three

Fair Value of Intangible Assets

An intangible asset is recognized apart from goodwill if it arises from contractual or legal rights or if it is capable of being separated from the acquired entity and transferred. Common intangible asset valuation methods include:

- Relief from Royalty Method — Patents and Trademarks
- Multi-period Excess Earnings Method — Customer Relationships, In Process Research and Development
- With and Without Method — Non-Compete Agreements
- Replacement Cost Method — Assembled Work Force
- Greenfield Method — Federal Communications Commission License

Intangible assets are generally valued after tax. An amortization tax benefit is added to each intangible asset as a part of the valuation. The amortization tax benefit reflects the additional value accruing to the asset brought about by the ability to deduct the amortization of the asset over its 15-year tax life. The amortization tax benefit is calculated as the present value of the tax shield (annual amortization multiplied by the tax rate) generated over the next 15 years.*

* The amortization benefit relates to U.S. acquisitions. Readers should be advised that this could be different for foreign market participant assumptions.

Common Intangible Asset Valuation Methods

Relief From Royalty Method
The Relief From Royalty method is categorized as an income-based method. This method estimates the portion of a company's earnings attributable to an asset based on the royalty rate the company would have paid for the use of the asset if it did not own it.

To apply this method, the key input is the hypothetical royalty rate.

- Observable — Royalty rates in negotiated licenses
- Market-based — Royalty rates found in available market data for licenses involving similar assets

Multi-period Excess Earnings Model
The principle behind the Multi-period Excess Earnings Model is that the value of an intangible asset is equal to the present value of the incremental after-tax cash flows attributable only to the intangible asset. The incremental after-tax cash flows attributable to the subject intangible asset are then discounted to their present value.

To apply this method, the company estimates the expected net income of a particular group of assets. Contributory Asset Charges (described on the following page) are then deducted from the total net after-tax cash flows. The remainder is the residual or "excess" earnings attributable to the intangible asset.

With and Without Method
Under the With and Without Method, the PFI is calculated with the existence and ownership of an intangible asset and compared to the PFI in the absence of the ownership of the intangible asset. The after-tax differential PFI attributable to the intangible asset is then discounted to its present value.

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The With and Without Method is also referred to as:

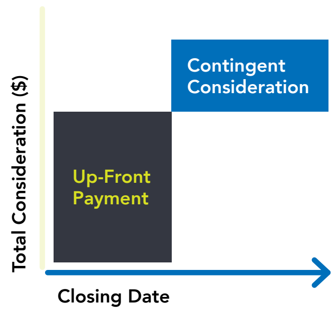
- Income Increment/Cost Decrement Method
- Comparative Business Valuation Method
- The Differential Value Method

Factors to consider in the With and Without Method in a non-compete:

- Willingness of individual to compete
- Importance to business
- Business model
- Skill set, etc.

Replacement Cost
Under the Replacement Cost technique, an asset's value today is what it would cost today to acquire a substitute asset of equivalent utility.

Greenfield Method
The Greenfield Method assumes that a company is started from scratch and owns only the subject asset. Therefore, the company must make investments, either directly through the purchase of assets or indirectly through the incurred start-up costs and losses, to build an operation comparable to the one in which the subject asset is utilized as of the current measurement date. Conceptually, investments made during the start-up period recreate the other assets required to support the business.



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Contingent Consideration

Contingent consideration*, commonly referred to as an earn-out, represents an obligation of the acquirer if future events or conditions are met. All contingent consideration is included in business combination accounting and is measured at its fair value as of the acquisition date.

Typically, the fair value of contingent consideration is determined by probability weighting specific well-supported outcomes via a Monte Carlo simulation model or similar risk-simulation tool.

Specific, Relevant Projections — Management should prepare multiple sets of projections that rely on independent future outcomes. These projections are weighted to determine the most appropriate probability-weighted outcome for the contingent consideration expected to be paid. ASC 805-30-35-1 states that changes resulting from events after the acquisition date, such as meeting an earnings target, reaching a specified share price, or reaching a milestone on a research and development project, are not measurement period adjustments.

The acquirer shall account for changes in the fair value of contingent consideration that are not measurement period adjustments as follows:

a. Contingent consideration classified as equity shall not be remeasured and its subsequent settlement shall be accounted for within equity.

b. Contingent consideration classified as an asset or a liability shall be remeasured to fair value at each reporting date until the contingency is resolved. The changes in fair value shall be recognized in earnings.

*ASC 805-30-25-5-7

Contributory Asset Charges

Contributory Asset Charges represent charges for the use of contributory assets used to support the subject asset and help generate revenue. These include working capital, fixed assets, work force and other intangible assets. Return rates are then calculated for each contributory asset.

Contributory Asset	Basis of Charge
Working Capital	Short-term lending rates for market participants
Fixed Assets	Financing rates for similar assets for market participants
Work Force	WACC +/- basis points to account for risk
Other Intangible Assets	WACC +/- basis points to account for risk

The resulting Contributory Asset Charge is the asset's fair value multiplied by its rate of return.

Allocation of Assets and Liabilities

Total consideration transferred is allocated among the fair value of the identifiable tangible and intangible assets and liabilities assumed.

Goodwill

Goodwill is considered a residual amount that represents the future economic benefits arising from the other assets acquired in a business combination that have not met the criteria for being individually identified and separately recognized. If the fair value of net assets acquired is less than the total consideration paid for the acquired entity, the difference is recorded as goodwill.

Goodwill = **Consideration transferred**
+ **Fair Value** of any non-controlling interest
+ acquisition date **Fair Value** of the acquirer's previously held equity interest
− **Net amount** of acquisition-date amounts of assets acquired and liabilities assumed

Bargain Purchase

In some cases, an acquirer may make a bargain purchase, a business combination where the acquisition-date amounts of identifiable net assets acquired, excluding goodwill, exceed the sum of the value of consideration transferred. This standard requires the recognition of a gain for a bargain purchase.

Paragraph ASC 805-30-25-4 requires the acquirer to reassess whether it has correctly identified all of the assets acquired and all of the liabilities assumed before recognizing a gain on a bargain purchase. As part of that reassessment, the acquirer shall then review the procedures used to measure the amounts this topic requires to be recognized at the acquisition date for all of the following:

a. The identifiable assets acquired and liabilities assumed
b. The noncontrolling interest in the acquiree, if any
c. For a business combination achieved in stages, the acquirer's previously held equity interest in the acquiree
d. The consideration transferred

The objective of the review is to ensure that the measurements appropriately reflect consideration of all available information as of the acquisition date.

The FASB and IASB consider bargain purchases to be anomalous transactions — business entities and their owners generally do not knowingly and willingly sell assets or businesses at prices below their fair values. However, bargain purchases have occurred and are likely to continue to occur. Circumstances in which they occur include a forced liquidation or distress sale (e.g., after the death of a founder or key manager), in which owners need to sell a business quickly, which may result in a price that is less than fair value. In general, these should be an exception to the rule.

Conclusion

Step back from the calculation once it is complete. Analyze each assumption, including the PFI and overall WACC. The Enterprise Value and Fair Values of the assets and liabilities should appear reasonable to a market participant.

Fair Value
Measurement

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