

# Chapter 7: Asset Valuation

## (Intangible Assets)

**Intangible assets are the most difficult items to quantify and qualify. Typically, most business sellers want a large payout for “blue sky” (goodwill). Quantifying intangible assets is critical for a purchase price allocation or when selling or buying a business. Although difficult to value, this class of asset is becoming more of an issue in today’s technology driven market. In some instances the intangible assets will account for the majority of the value of a firm.**

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### Tangible vs. Intangible Assets

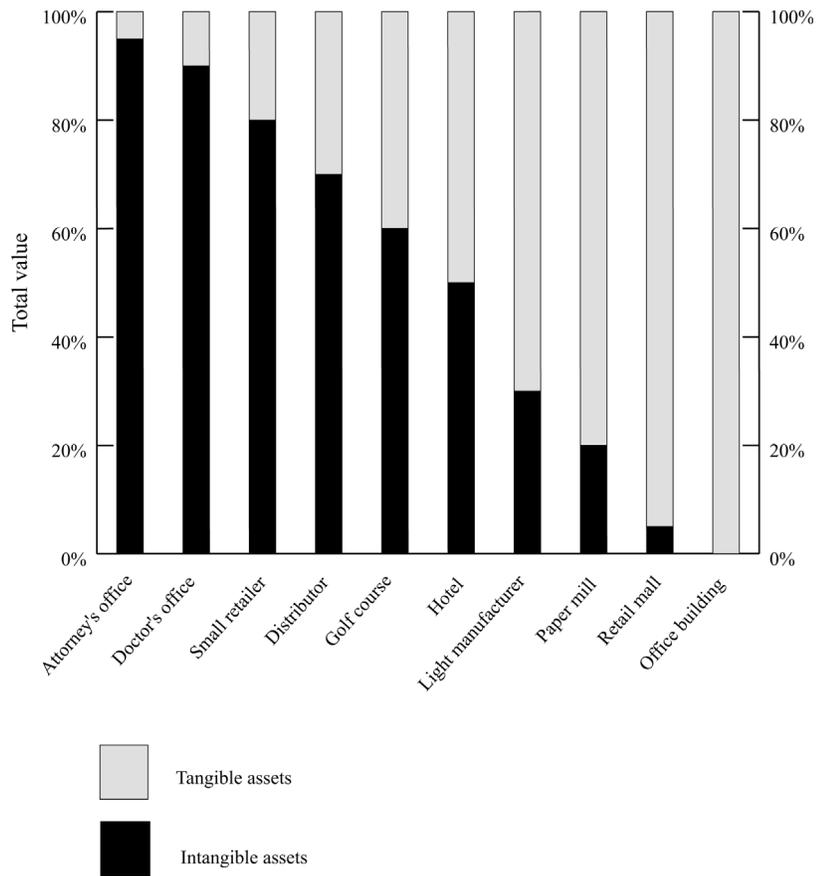
Both tangible and intangible assets represent an opportunity for future economic benefits. Tangible assets are generally defined as those physical assets which are used for the purpose of producing and distributing goods, and sometimes services. Tangible assets are usually fixed and have a physical existence (real estate, equipment, cash, accounts receivable). Many times the value of a specific tangible asset will be measured by its cost.

Intangible assets typically have a recognizable description, have the ability of being destroyed or terminated, and derive most of their value from expected future benefits. These assets have no physical existence (for the most part). Intangible assets can be measured by consideration of their costs but are generally valued based on the expected economic income to be generated by the asset over a period of time.

Usually businesses with a *low* percentage of tangible assets (such as service companies and professional practices) have a *large* percentage of intangible net worth. On the opposite side of the spectrum are asset intensive businesses whose value is principally from its fixed and current assets, and less so from intangible assets. Figure 7-1 on page 134 can more accurately show these differences for various types of businesses.

Assuming that two companies have identical cash flows: (a) Company A has 20% of its value in intangible assets, with 80% in tangible assets; and, (b) Company B has 80% of its value in intangible assets, with 20% in tangible assets. Company A will probably have more debt, need more of a reserve for the replacement of short lived assets, and is possibly a high commodity business, relative to Company B. These differences are important to understand when valuing a business or the intangible asset components.

**Figure 7-1: Differences in Fixed versus Intangible Assets for Various Businesses**



**Reasons for valuation of Intangible assets**

Table 7-1 lists the most typical reasons for the request of an intangible valuation.

**Table 7-1: Reasons for Intangible Asset Valuations**

Category	Reason
Purchase Price Allocation	Statements of Financial Accounting Standards (SFAS) 141 & 142, IRC 1060, IRC 197
Pre-acquisition Assessment	Discerning what is tangible vs. intangible
Purchase of Selected Assets	Licensing or purchase
Financing Purposes	Financing
Bankruptcy	Solvency, Collateral, taxation issues
Royalty Rate Negotiation	Negotiations
Intercompany Transfer Pricing	IRC 482
Tax Planning	Evaluating gains/losses
Ad Valorem Taxes	Tax reduction
Litigation	Damages

Of the intangibles shown in Table 7-1, Section 197 assets are the most commonly valued intangibles. Section 197 intangible assets are assets categorized by the Internal Revenue Service for amortization over 15 years. Section 197 assets include:

- (1) goodwill and going concern value, and covenants not to compete as they relate to the sale of a business;
- (2) workforce in place;
- (3) information base;
- (4) know how;
- (5) any franchise, trademark, or trade name;
- (6) any permit, license, or other right granted by a government agency;
- (7) any customer based intangible;
- (8) any supplier based intangible.

### Identifiable/Unidentifiable Intangibles

Table 7-2 shows a general list of intangibles which are usually encountered in a business. Note that assets which are not easily identifiable are usually referred to as *goodwill*.

**Table 7-2: General List of Intangible Assets\***

Formulas	Loan and Mortgage Portfolio	Files and Records
Know How	Copyrights	Film and Record Libraries
Personnel	Core Bank Depositors	Film Rights
Trademarks and Names	Covenants Not To Compete	Franchise Agreements
Packaging	Customer Lists & Goodwill	Unpatented Technology
Indirect Construction Costs	Designs, Drawings, and Models	Backlog
Run-In Costs	Distribution Networks	Contracts
Systems	Easement Rights	Leasehold Interests
Microfiche	Favorable Debts	License Agreement
Rights	Mineral Water Rights	Location Value
Going Concern	Patents	Software
Assembled Plant	Patent Applications	Trade Secrets
Work Force	Performance Rights	Product Line

\* this is not a comprehensive list

Both identifiable and unidentifiable intangibles may have unlimited useful lives. Depending upon the type of asset, the useful life may be limited to factors such as legal, contractual, or regulatory provisions, competition, life expectancies of employees, and economic factors.

Valuations are mostly requested for:

- patents
- trademarks and names
- covenants not to compete
- goodwill
- copyrights and trade secrets

Most intangible assets are valued based upon a cost, or an income approach. Unfortunately, most values rely upon proforma (future) projections. A discussion of the different approaches to valuing intangibles is presented first, followed by an overview of these four most requested valuations.

### Cost Approach

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The cost approach is the total of all expenses incurred to create the intangible asset. Two important components of the cost approach are useful life and obsolescence. The most common techniques of establishing the useful life are:

- The remaining legal life (e.g., for a patent, trademark, license, copyright or contract)
- Remaining physical life
- Remaining functional life (certain chemical formulas, in say lubricants or cleaners, become obsolete if they are not continually updated)
- Remaining technological life (e.g. with computers, 486 technology gives way to pentium technology, and so forth)
- Economic Life
- Actuarial Life (e.g. cable subscribers, or telephone advertising customers)

### Obsolescence

Obsolescence (when something has a diminished value versus its original cost) is an important concept. While it is usually discussed in a cost approach, it is most pertinent to an income approach. Obsolescence of a product, a trade-name, or mark related to the product, depends upon the industry in which the company operates, and whether goodwill is typical in the industry. In some industries, obsolescence can occur within 3-6 months (e.g., computers/software), while in other industries, obsolescence can occur after decades or longer. Table 7-3 shows the differences in various industry products with respect to obsolescence.

So why does obsolescence matter? Well, one should not capitalize an income stream or attribute a value to an intangible asset which is continually losing value. This problem can be circumvented by making the discount rate a function of the rate of obsolescence [i.e. 20% discount rate - (-25% growth rate) = 45% discount rate]. The 25% would represent an erosion of 25% of the existing income/year.

Another method which can be used is to utilize a capitalization or discount rate which incorporates a steady erosion of earnings for a finite period of time. This concept is similar to a sinking fund factor.<sup>1</sup>

**Table 7-3: Economic Obsolescence of Different Industry Products**

Industry	Age Life
Computer Hardware	1-36 months
Computer Software	1-36 months
Chemicals	1-10 years
Pharmaceuticals	1-15 years
Steel	1-20 years
Plastics	1-15 years

Let's assume that a product has a life expectancy of 4 years, and at the end of the 4 years the product will be obsolete (have no value). Assuming that today's safe rate is 5.5%, a speculative rate of 30% over and above the safe rate, and today's net income from the intangible asset is \$175,000, then the value of the asset would be calculated in Table 7-4 to be \$330,064.

**Example (1) of Sinking Fund and Obsolescence**

**Table 7-4: Sinking Fund Calculation for Obsolete Intangible Asset**

Variable	Calculation
Sinking fund factor for 4 years @ 5.5%	$\frac{0.055}{(1 + 0.055)^4 - 1} = 23.02\%$
Plus: speculative rate	30%
Total capitalization rate	53.02%
Value	$\frac{\$175,000}{0.5302} = \$330,064$

Similarly, let's assume that the discount rate for an intangible asset is 35%, assuming no growth or erosion of income and assuming in the previous example (Table 7-4) that the value of the asset will lose 75% of its value in 4 years. Today's present value can be calculated below:

**Example (2) of Sinking Fund and Obsolescence**

$$\text{Present Value} = \frac{\$175,000}{0.35 - (-0.75) \left[ \frac{0.35}{((1.35)^4 - 1)} \right]} \quad (\text{EQ 7-1})$$

$$\text{Present Value} = \frac{\$175,000}{0.4631}$$

1. a fund in which periodic deposits of equal amounts of money are accumulated to pay a debt or replace assets.