

IVS 200: BUSINESSES AND BUSINESS INTERESTS



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Business & Intangible Assets Valuation



The logo for the International Valuation Standards Council (IVSC). It features the letters 'IVSC' in white on a dark purple, tilted rectangular background. To the left of this background are three green chevron shapes pointing to the right.

IVSC

IVS 200: Businesses & Business Interests

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Scope

The definition of what constitutes a business *may* differ depending on the *purpose* of a *valuation*, but generally involves an organisation or integrated collection of *assets* engaged in commercial, industrial, service or investment activity. Generally, a business would include more than one *asset* (or a single *asset* in which the *value* is dependent on employing additional *assets*) working together to generate economic activity that differs from the outputs that would be generated by the individual *assets* on their own.

Individual intangible assets, or a group of intangible assets might not constitute a business but would nonetheless be within the scope of this standard if such *assets* generate economic activity that differs from the outputs that would be generated by the individual assets on their own.

If the *assets* do not meet these criteria, a *valuer* should defer to IVS 210 *Intangible Assets* and IVS 220 *Non-Financial Liabilities*.



Approach

Interests in a business (eg, securities) can also take many forms. To determine the value of a business interest, a *valuer* should first determine the *value* of the underlying business by applying these standards. In such instances, business interests should be within the scope of this standard but depending on the nature of the interest certain other standards may be applicable.

Valuers must establish whether the *valuation* is of the entire entity, shares or a shareholding in the entity (whether a controlling or non-controlling interest), or a specific business activity of the entity. The type of *value* being provided must be appropriate to the *purpose* of the *valuation* and communicated as part of the scope of the engagement (see IVS 101 *Scope of Work*). It is especially critical to clearly define the business or business interest being valued as, even when a *valuation* is performed on an entire entity, there may be different levels at which that *value* could be expressed. For example:

- (a) Enterprise value: Often described as the total value of the equity in a business plus the *value* of its debt or debt-related liabilities, minus any cash or cash equivalents available to meet those liabilities.
- (b) Total invested capital value: The total amount of money currently invested in a business, regardless of the source, often reflected as the *value* of total assets less current liabilities and cash.
- (c) Operating value: The total value of the operations of the business, excluding the value of any non-operating assets and liabilities.
- (d) Equity value: The *value* of a business to all of its equity shareholders.



Market Approach

The market approach is frequently applied in the *valuation* of businesses and business interests as these *assets* often meet the criteria in IVS 105 *Valuation Approaches and Methods*, para 20.2 or 20.3. When valuing businesses and business interests under the Market Approach, *valuers should* follow the requirements of IVS 105 *Valuation Approaches and Methods*, sections 20 and 30.

The three most common sources of data used to value businesses and business interests using the market approach are:

- (a) public stock markets in which ownership interests of similar businesses are traded,
- (b) the acquisition market in which entire businesses or controlling interests in businesses are bought and sold, and
- (c) prior transactions in shares or offers for the ownership of the subject business.



Market Approach

There *must* be a reasonable basis for comparison with, and reliance upon, similar businesses in the market approach. These similar businesses *should* be in the same industry as the subject business or in an industry that responds to the same economic variables. Factors that *should* be considered in assessing whether a reasonable basis for comparison exists include:


- (a) similarity to the subject business in terms of qualitative and quantitative business characteristics,
- (b) amount and verifiability of data on the similar business, and
- (c) whether the *price* of the similar business represents an arm's length and orderly transaction.



Income Approach

When using an income approach it *may* also be necessary to make adjustments to the *valuation* to reflect matters that are not captured in either the cash flow forecasts or the *discount rate* adopted. Examples *may* include adjustments for the marketability of the interest being valued or whether the interest being valued is a controlling or non-controlling interest in the business. However, *valuers should* ensure that adjustments to the *valuation* do not reflect factors that were already reflected in the cash flows or *discount rate*. For example, whether the interest being valued is a controlling or non-controlling interest is often already reflected in the forecasted cash flows.

While many businesses *may* be valued using a single cash flow scenario, *valuers may* also apply multi-scenario or simulation models, particularly when there is *significant* uncertainty as to the amount and/or timing of future cash flows.



Income Approach

In methods that employ discounting, expected growth *may* be explicitly considered in the forecasted income or cash flow. In capitalisation methods, expected growth is normally reflected in the capitalisation rate. If a forecasted cash flow is expressed in nominal terms, a *discount rate* that takes into account the expectation of future price changes due to inflation or deflation *should* be used. If a forecasted cash flow is expressed in real terms, a *discount rate* that takes no account of expected price changes due to inflation or deflation *should* be used.



Cost Approach

The cost approach cannot normally be applied in the *valuation* of businesses and business interests as these *assets* seldom meet the criteria in IVS 105 *Valuation Approaches and Methods*, paras 70.2 or 70.3. However, the cost approach is sometimes applied in the *valuation* of businesses, particularly when:

(a) the business is an early stage or start-up business where profits and/ or cash flow cannot be reliably determined and comparisons with other businesses under the market approach is impractical or unreliable,

(b) the business is an investment or holding business, in which case the summation method is as described in IVS 105 *Valuation Approaches and Methods*, paras 70.8-70.9, and/or

(c) the business does not represent a going concern and/or the *value* of its *assets* in a liquidation *may* exceed the business' *value* as a going concern.

Replacement Cost

Generally, replacement cost is the *cost* that is relevant to determining the *price* that a *participant* would pay as it is based on replicating the utility of the *asset*, not the exact physical properties of the *asset*. Usually replacement cost is adjusted for physical deterioration and all relevant forms of obsolescence. After such adjustments, this can be referred to as depreciated replacement cost.

The key steps in the replacement cost method are:

- (a) calculate all of the *costs* that would be incurred by a typical *participant* seeking to create or obtain an *asset* providing equivalent utility,
- (b) determine whether there is any depreciation related to physical, functional and external obsolescence associated with the subject *asset*, and
- (c) deduct total depreciation from the total *costs* to arrive at a *value* for the subject *asset*.

The replacement cost is generally that of a modern equivalent *asset*, which is one that provides similar function and equivalent utility to the *asset* being valued, but which is of a current design and constructed or made using current cost-effective materials and techniques.

Reproduction Cost Method

Reproduction cost is appropriate in circumstances such as the following:

- (a) the *cost* of a modern equivalent *asset* is greater than the *cost* of recreating a replica of the subject *asset*, or
- (b) the utility offered by the subject *asset* could only be provided by a replica rather than a modern equivalent.

The key steps in the reproduction cost method are:

- (a) calculate all of the *costs* that would be incurred by a typical *participant* seeking to create an exact replica of the subject *asset*,
- (b) determine whether there is any depreciation related to physical, functional and external obsolescence associated with the subject *asset*, and
- (c) deduct total depreciation from the total *costs* to arrive at a *value* for the subject *asset*.



IVS 105 Cost Considerations

An *asset* acquired from a third party would presumably reflect their *costs* associated with creating the *asset* as well as some form of profit margin to provide a return on their investment. As such, under *bases of value* that assume a hypothetical transaction, it *may* be appropriate to include an assumed profit margin on certain *costs* which can be expressed as a target profit, either a lump sum or a percentage return on *cost* or *value*. However, financing costs, if included, *may* already reflect *participants'* required return on capital deployed, so *valuers should* be cautious when including both financing costs and profit margins.

70.13. When *costs* are derived from actual,

Summation Method

The summation method, also referred to as the underlying *asset* method, is typically used for investment companies or other types of *assets* or entities for which *value* is primarily a factor of the *values* of their holdings.

The key steps in the summation method are:

- (a) value each of the component *assets* that are part of the subject *asset* using the appropriate valuation approaches and methods, and
- (b) add the *value* of the component *assets* together to reach the *value* of the subject *asset*.



Illiquidity Discounts

We can never simply use a model or formula for calculating an illiquidity discount in place of professional judgment.

There is no one “right answer,” but instead only the answer that is most intellectually defensible.

In Berkshire Hathaway’s 2016 annual report to shareholders, Warren Buffett stated, “Intrinsic value is an estimate rather than a precise figure, and it is additionally an estimate that must be changed if interest rates move or forecasts of future cash flows are revised. Two people looking at the same set of facts, moreover—and this would apply even to Charlie [Munger, Berkshire Hathaway’s vice chairman] and me—will almost inevitably come up with at least slightly different intrinsic value figures.”



Restricted Stock Studies

Evidence from restricted stock studies in the United States shows prices being discounted to reflect illiquidity.

Restricted stocks are shares issued by a public company that have restrictions attached. Typically, this means that the stock cannot be publicly traded, but it can be privately traded.

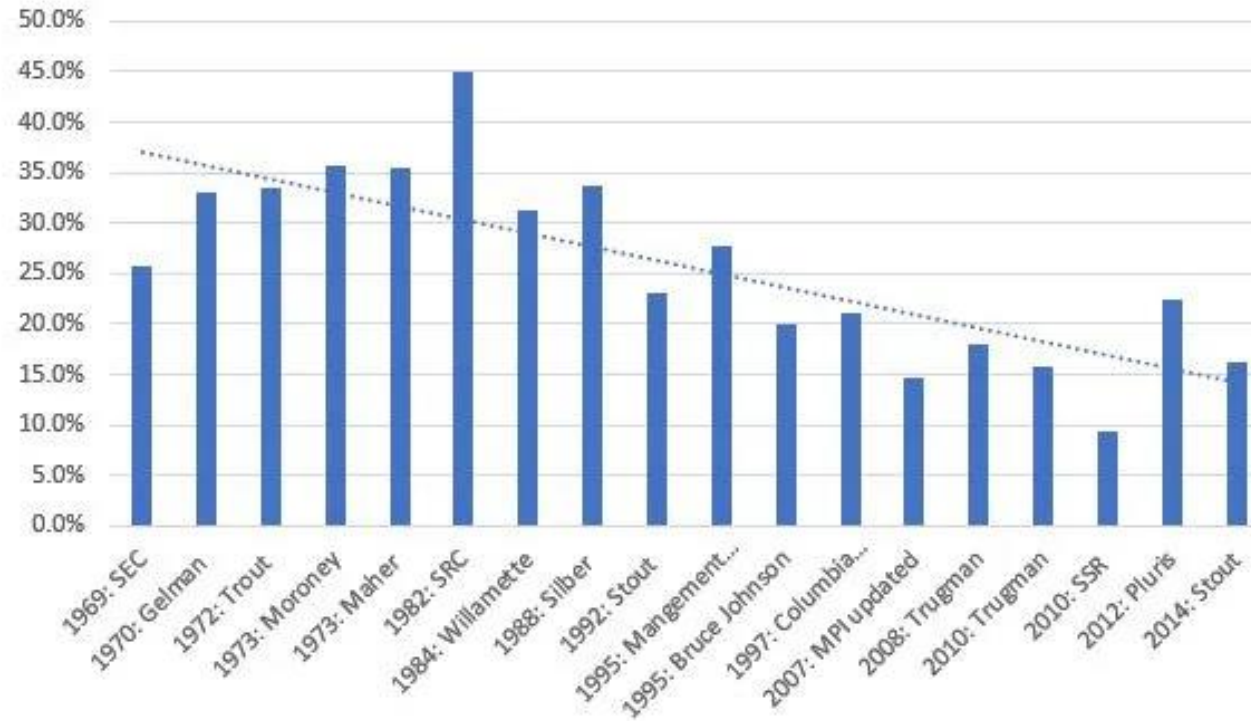
Given the restriction on trading, the restricted stock is issued by the company at a discount to its market price. The restricted stock studies look at the prices at which companies issue restricted stock and compare those prices to the listed stock price.


Research over eighteen stock studies provides a discount range of between 9.3% and 35.6%, as shown in the figure below (1). The average discount across the surveys was 24.5%, but the discounts in the surveys have trended downwards. The average discount in the last ten surveys was only 18.8%.



Restricted Stock Studies

Figure 1 Restricted Stock Study average discounts






Put Option Model

Assuming that the main driver of illiquidity is the risk that the price of the business may fall while the investor waits for a buyer or the business becomes unsaleable, then a put option model may be used to estimate an illiquidity discount.

A put option is a contract giving the owner the right, but not the obligation, to sell an underlying security at a pre-determined price (the strike price) within a specified time frame.

The price of the put option depends on the volatility of a stock's market price, the strike price, the time frame and the risk-free rate. As volatility increases, all other factors remaining constant, the price of the put option increases and so the implied illiquidity discount increases.



Put Option Model

If it takes a period of time for an investor to sell a privately held business, then the value of liquidity is the value of a put option allowing an investor to sell the business at any time from listing to close, at the value at the listing date.

In calculating illiquidity discounts Shannon Pratt refers to the 2000 Business Broker survey which found the average time to sell a business was approximately six months from listing to closing.

Using a Black-Scholes option pricing and assuming: the stock price equal to the strike price, an expiry period of six months, no dividends, a risk-free rate of 1%, standard deviation in equity value of between 25% and 100%; then the implied illiquidity discount range is between 6.8% and 27.3%.



Bid-ask spread Regression

Professor Damodaran suggests that an illiquidity discount can be implied by estimating a synthetic bid-ask spread regression.

The bid-ask spread is the difference between the price at which a listed stock can be acquired (ask price) and the price at which the stock can be sold (bid price).

The bid-ask spread is set by market dealers and the spread is designed to cover the risk of holding the equity stock, processing costs and the cost of trading with informed investors.

The risk of holding equity stock is influenced by the trading volume of a stock. A stock which is highly traded will typically have a low bid-ask spread and low (thinly) traded stocks will have a higher bid-ask spread. Studies show that the bid-ask spread is also linked to the size of a firm.



Bid-ask spread Regression

Professor Damodaran carried out a bid-ask spread regression against annual revenues, a dummy variable for positive earnings, cash to firm value and monthly trading volumes to firm value.

The regression analysis appears to show that the implied illiquidity discount rate is not significantly affected by revenue.

Assuming positive earnings, a cash to firm value of 5.0%, no trading and revenue between the bid-ask spread is between \$1 million and \$100 million, the bid-ask spread (implied illiquidity discount) only ranges between 12.2% and 11.19%.



Conclusion

All assets are illiquid, but there are differences in the degree of illiquidity.

Illiquidity matters to investors. They pay lower prices and demand higher returns from less liquid assets than from otherwise similar more liquid assets

The effect of illiquidity on value can be estimated in one of three ways

The value of the asset can be computed as if it were liquid, and then adjusted for illiquidity at the end (as a discount)

The discount rate used for illiquid assets can be set higher than that used for liquid assets

The illiquidity effect can be built into value by looking at how similar illiquid companies have been priced in transactions or by adjusting publicly traded company multiples for illiquidity

Source: Aswath Damodaran