Intrinsic Value and the Intrinsic Value Line ™

The *Intrinsic Value Line* ™ shows the *intrinsic value* of an enterprise at various points in time. It is both a theoretical and real line. In its theoretical sense, the Intrinsic Value Line ™ describes the notion that an enterprise always has an intrinsic value and that one should understand what that value is and what factors (i.e., value drivers) are driving that value. In the real sense, the Intrinsic Value Line ™ can be calculated and used as a benchmark for judging the creation of value in an enterprise.

Intrinsic Value

The intrinsic value of a business or other investment can be defined as the present value of the future cash flows of that business or investment. To determine the intrinsic value, the expected future cash flows of a business or other investment are discounted back to the present at an appropriate discount rate. The formula for determining intrinsic value and an example are shown below. While simple to define, the estimation of the factors that determine the intrinsic value is much more complex and requires an understanding of financial and investment theory as well as experience in analyzing businesses and in making the estimates and calculations. Damodaran's book on valuation, *The Little Book of Valuation*[1], provides an excellent treatise on determining and calculating intrinsic value. In practice, the intrinsic value of a business or investment is often estimated using other techniques and methodologies in addition to the discounted cash flow technique described above.

The general formula, or model, for the calculation of the intrinsic value of a business or investment is,

$$V_j = \frac{C_1}{(1+k)} + \frac{C_2}{(1+k)^2} + \frac{C_3}{(1+k)^3} + \;.\;.\;.\;.\;.\;.\;.\; \frac{C_\infty}{(1+k)^\infty} = \sum_{t=1}^{\infty} \frac{C_t}{(1+k)^t}$$

where:

V_j = value of business *j* or investment *j*

C_t = cash flow during period *t*

k = required rate of return on business *j* or investment *j*

[1] Damodaran, A. (2011). *The little book of valuation: How to value a company, pick a stock and profit*. Hoboken, NJ: John Wiley & Sons.

An Example - The Intrinsic Value of a Bank Account

Let us use a simple bank account to illustrate the concept of intrinsic value. If you put $100 into a bank account that pays 5%, and you keep your money in this bank account for one year, you would have $105 at the end of the year.

Now let's reverse the calculation. If the bank promises to pay you $105 one year from now and the interest rate on bank accounts is 5%, what is the intrinsic value of the bank account?[2] *The answer is: $100.*

Intrinsic Value Line ™

The Intrinsic Value Line ™ shows the intrinsic value of an enterprise at various points in time. It starts with an estimate of the current intrinsic value. In the chart below, this is shown as point A on the IV Line in the chart. The intrinsic values for the past five years (historical intrinsic values) and a forecast of the intrinsic values for the coming five years (projected intrinsic values) are calculated next. As an example, point B on the IV Line is an historical intrinsic value and point C on the IV Line is a projected intrinsic value. A line drawn through the historical, current, and projected intrinsic values derives the Intrinsic Value Line ™.

The historical intrinsic values show whether value has been created in the enterprise in the past. The projected intrinsic values show whether it can be expected that value will be created in the future in the enterprise.

Intrinsic value added is the difference between the intrinsic value in the current year and the intrinsic value in the previous year.

The slope of the Intrinsic Value Line ™ should be the focus of business managers and entrepreneurs. The greater the slope of the Intrinsic Value Line ™, the more value is being created in the enterprise.

Investors should be interested in the slope of the Intrinsic Value Line ™ as well. A more positively sloped Intrinsic Value Line ™ tells the investor that value has been created in the enterprise on an historical basis, and that value can be expected to be created in the enterprise in the future.

The current intrinsic value, point A on the IV Line in the chart, is of particular interest to the investor. This is the benchmark by which investors will want to invest. If the price (public market price or private price) of an enterprise is below the intrinsic value of the enterprise, this is an indication that the investor is getting a good price for his purchase. If the price is above the

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[2] For those readers who are familiar with time-value-of-money calculations, in this example the number of periods (N) is 1; the future value (FV) is $105; the interest rate (i), also known as the discount rate or required rate of return, is 5%; and the present value (PV), which we define here as the *intrinsic value*, is $100.

intrinsic value, the investor should carefully consider whether or not the purchase makes sense in light of the intrinsic value of the enterprise.

INTRINSIC VALUE LINE ™