

How to Value the Equity In Your Business

- ***Case Study: Rosedale Products, Inc.***
- **Valuation Concepts and Terms**
- **Book Value Calculations**
- **Market Value Calculations**
- **Dividend-Paying Calculations**
- **Six More Valuation Methods**
- **Value of Rosedale's Projected Income**

Table of Contents

<u>Subject Area</u>	<u>Page</u>
Valuation Concepts and Terms	3
<i>Case Study: Rosedale Products, Inc.</i>	4
#1 — Book Value Calculations	6
#2 — Market Value Calculations	7
#3 — Dividend-Paying Calculations	8
#4 — Six More Valuation Methods	10
Exhibits	
<i>Exhibit 1: How to Value Rosedale's Projected Earnings</i>	12
<i>Exhibit 2: Present Value Rates and Factors for \$1</i>	14
<i>Exhibit 3: Rate of Return Components</i>	15

These basic values will give you a good ballpark figure on the worth of your business.

Calculate Basic Values When...

- Selling or buying a business
- Giving stock options to key executives
- Effecting a buy-sell agreement with other owners
- Buying out a minority owner or partner
- Selling stock via an Employee Stock Ownership Plan
- Transferring ownership to family members
- Evaluating investment opportunities in publicly held companies

Valuation Concepts and Terms

Cash Flow. If a company's net income is \$100,000 and its depreciation and amortization expenses are \$30,000, its cash flow is \$130,000.

Capitalization Rate. A return rate that values an income level. For example, if a company's net income is \$100,000 and that income level is capitalized at 20%, the value of the net income is \$500,000 (\$100,000 divided by .20). Basically, the income of \$100,000 represents a return of 20% on the \$500,000 investment (\$100,000 divided by \$500,000 value).

Discounted Earnings. The value of an ongoing business based on its future earning power. This method projects future earnings and calculates their present value *today* using an assumed discount (present value) rate.

The basic principle underlying this method is that a dollar earned in the future is *worth less* than a dollar earned today. Thus, it is not only the amount of income that a company is expected to generate that determines its real value, but also the timing of that income.

Price-Earning's Multiple (p/e). The p/e is the market value of a company's common stock divided by its earnings per share. For example, if the market value of a stock is \$20 and the EPS is \$1, the p/e multiple is 20.

Present Value Analysis. The value today of a future payment — or stream of payments — discounted at a certain present value rate. It is a tool that permits comparison of investment alternatives by computing *today's* value of cash inflows and outflows received or paid in future years.

Case Study: Rosedale Products, Inc.

When a business is first established, the owners have a pretty free hand in determining the type of stock and setting an initial value on the shares. When the company starts to grow and needs outside capital from new stockholders, or the owner wants to sell the business or issue stock options to key executives, more objective, defensible values come into play, including:

- Book Value
- Market Value
- Dividend Value
- Adjusted Book Value
- Replacement Value
- EBIT Value
- Multiple of Sales Value
- Liquidation Value

Applications: The concepts and values discussed in this Report apply to all types of business entities, including sole proprietorships, partnerships, C and S corporations, and limited liability companies. Simply use the term Ownership Position rather than shares of Common Stock.

The Case Study in this Report will help you understand the basic values associated with common stock and other ownership positions in closely held businesses. To illustrate these values, let's review and analyze *Rosedale Products, Inc.*, a manufacturers' rep business founded by Sandra Rosedale. Here is the initial funding:

- 10,000 shares of common stock were issued and purchased by Sandra Rosedale for \$25,000 — \$2.50 per share.
- 250 shares of preferred stock were sold to an investor/friend for \$25,000 — \$100 per share. The dividend was set at 8%.

Based on the two financings, here is the company's initial capitalization:

Stockholders' Equity:

Preferred Stock — 8%, \$100 par value; authorized, 1,000 shares; issued and outstanding, 250 shares	\$25,000
Common Stock — \$0.10 par value; authorized, 100,000 shares; issued and outstanding, 10,000 shares	1,000
Capital Surplus	24,000
Retained Earnings	<u>0</u>
Total Stockholders' Equity*	<u>\$50,000</u>

* Also referred to as a company's Net Book Value or Net Worth.

About the Common Stock: The common stock account of \$1,000 is simply 10,000 shares times \$0.10 par value per share. The par value is a value set by the company's board of directors and legal counsel when the stock is initially authorized and issued. The *capital surplus* account is the amount of capital invested in common stock in excess of the stock's par value. Since the par value was set at \$0.10 per share and 10,000 shares were purchased at \$2.50 per share, \$24,000 is credited to capital surplus — \$2.40 times 10,000 shares. Accountants sometimes call the *capital surplus* account "paid-in-capital" or "capital in excess of par or stated value".

About the Preferred Stock: There are three principal differences between common and preferred stock. *First*, preferred stock requires annual dividends be paid and the dividends must be paid before any common stock dividends. *Second*, if the company goes bankrupt or is liquidated, the preferred stock has priority over the common stock, i.e., preferred stockholders receive cash from the liquidation of a business *after* all debt is repaid, but *before* any money is paid to the company's common stockholders. *Third*, there is usually a fixed redemption (repayment) period for the preferred stock, i.e., it must be repaid over a specified period, usually ten years or more.

Some preferred stock also carries the right to convert the shares into common stock, in which case the preferred stockholders on conversion would gain the same rights as common stockholders in terms of voting and sharing in the future growth

in the business' value.

Now to the calculations of the values for Rosedale Products, Inc.

#1. Book Value Calculations

In most start-up companies, the book value per share is equivalent to the initial common stock investment by the company's founders. Based on Ms. Rosedale's investment of \$25,000 for 10,000 shares, the book value per share is \$2.50. As the business grows and generates profits, all amounts retained in the business (not paid out in dividends) will be a credit (increase) to retained earnings. All losses will be a debit (decrease) to retained earnings.

Here's an example: Let's assume *Rosedale Products* earns \$50,000 and declares a common stock dividend of \$0.20 per share:

Net Income	\$50,000
<i>Less:</i> Dividends Paid	
On Preferred Stock	(2,000)
On Common Stock	<u>(2,000)</u>
Net Income after Dividends	<u>\$46,000</u>

The \$4,000 dividends were computed as follows: 8% on the \$25,000 preferred stock equals \$2,000 and \$0.20 times 10,000 shares of common stock equals \$2,000. Thus, the initial common stockholders' equity account increases from \$25,000 to \$71,000, reflecting the increase in retained earnings of \$46,000. If there is a loss rather than a profit, the retained earnings would be a negative number and the book value per share would decline. However, with the \$46,000 retained in the business and the initial stock investment of \$25,000, the *new* book value per share of common stock is computed as follows:

$$\begin{aligned}\text{Book Value per Share} &= \frac{\text{Common Stockholders' Equity}}{\text{Common Shares Outstanding}} \\ &= \frac{\$71,000}{10,000} = \$7.10\end{aligned}$$

With the retention of last year's \$46,000 profit, Ms. Rosedale's book value per

share increased from \$2.50 (at the company's start) to \$7.10, an increase of 184%. Viewed another way, the book value of her investment in the business increased from \$25,000 to \$71,000.

#2. Market Value Calculations

Another method of valuing a business is by projecting and then discounting a company's future earnings. Many times, this results in the highest value for a business. For example, if *Rosedale's* \$50,000 profit were to grow to \$200,000 in five years, the company would be worth, in *today's* dollars, the present value of that projected net income stream. That value is determined by multiplying the earnings for each year (over the five-year period) by an appropriate discount or present value rate, usually 15%, and then totaling them.

Here's an example: Let's assume *Rosedale* earns \$200,000 five years from today. Using a 15% present value rate (factor of .497), \$200,000 of earnings realized five years from now is worth \$99,400 in today's market. Put another way, \$99,400 invested today at a compounded annual growth rate of 15% for five years will be worth \$200,000 at the end of the fifth year. To value *Rosedale's* projected net income for the *entire* five-year period, please see the example on page 12.

Price-Earning's Multiples: Wall Street and appraisers use price-earning's (p/e) multiples in valuing companies. For example, consider the following facts:

Market Value per Share	\$30
Number of Shares Outstanding	100,000
Net Income	\$200,000

Based on these facts, the following can be computed:

$$\frac{\text{Net Income}}{\text{Shares Outstanding}} = \text{Earnings Per Share}$$

$$\frac{\$200,000}{100,000} = \$2 \text{ per Share}$$

$$\frac{\text{Market Value}}{\text{Earnings per Share}} = \text{Price-Earning's Multiple}$$

$$\frac{\$30}{\$2} = 15 \text{ p/e}$$

Axiom: The faster the growth rate of a company, the higher the p/e. This is why many fast growing, publicly held companies sell at p/e multiples in excess of 30 times earnings and, in some cases, much higher. As a general rule, many stock brokers recommend buying a stock when its p/e multiple is less than the company's annual growth rate. For example, if a stock is selling at a p/e of 12 and the company's annual growth rate is 20%, that would indicate an undervalued stock. But, of course, do your research before buying the stock and find out why it's selling at a low p/e. (By the way, this type of p/e analysis can be applied to your own company's growth rate when valuing or setting a price tag for the business.)

Capitalization Rate: Another way to look at the p/e multiple is the capitalization rate. That's the return being earned on the market value of the common stock. Here you use the reciprocal of the p/e, 1.00 divided by the p/e of 15 equals 6.7%. Basically, the company earns \$2 per share on its \$30 market price (\$2 divided by \$30 equals 6.7%). That return calculation is particularly important in a closely held business since it reflects the return an owner is making on his or her total investment in the business.

#3. Dividend-Paying Calculations

Many investment analysts, particularly at financial institutions, value a company's stock on the annual dividends it pays or its capacity to pay dividends. Although not applicable to most smaller businesses, the following analysis will help you better evaluate investment opportunities in larger publicly held companies and your own company's capacity to pay dividends.

There are two calculations used to value a company's dividends: The dividend

payout ratio and the dividend yield. The *dividend payout ratio* is simply the percentage of a company's net income paid to its common stockholders. The higher the payout ratio, the higher the *dividend yield* to the stockholders.

Example: Based on the \$200,000 net income and 100,000 shares of stock outstanding, if this company pays out \$80,000 in common stock dividends (\$0.80 per share), the following can be computed:

$$\frac{\text{Dividends Paid}}{\text{Net Income}} = \text{Dividend Payout Ratio}$$

$$\frac{\$ 80,000}{\$200,000} = 40\% \text{ Dividend Payout Ratio}$$

$$\frac{\text{Dividends per Share}}{\text{Market Value}} = \text{Dividend Yield}$$

$$\frac{\$0.80}{\$30} = 2.67\% \text{ Dividend Yield}$$

The 2.67% dividend yield is important for two reasons. *First*, that yield is an annual return on an investment and it can be compared to other investment opportunities, such as money-market accounts, certificates of deposit, triple-A bonds, etc.

Second, the yield is in addition to any increase in the market value of the company's common stock. That's why many investors, including mutual funds and financial institutions, balance their portfolios with stocks that pay a current dividend and also have the potential for growth.

For fast growing companies, which have to retain most or all of their earnings to finance their growth, the dividend yield isn't a significant factor in analyzing the value of the company's stock. In this case, an investor must rely solely on the increase in the value of the stock as his or her return.

What about closely held businesses? A buyer will value the company's *total* net income as a return on investment. For example, if a buyer pays \$1 million for a company which earns \$100,000, the buyer's return is 10% *plus* any future growth in the company's earnings.

#4. Six More Valuation Methods

As a business grows, other values come into play. Here are the major ones:

□ *Adjusted Net Book Value:* This method increases the company's reported net book value to the extent that certain assets, principally real estate, inventory, accounts receivable, equipment, and investments in affiliated businesses, exceed their cost basis as reported on the balance sheet by the company's accountant. This approach usually increases the value of the assets and thus the company's net book value.

□ *Earnings Before Interest and Taxes:* Referred to as EBIT or a company's operating profits, this method is similar to the p/e method. You determine the company's EBIT and apply a multiple to it, usually 4 to 8, principally depending on the company's growth rate, its profit margin on each dollar of sales, industry niche, proprietary products, management depth, balance sheet substance, e.g., low debt-to-equity ratio, and other factors. The higher a company's growth rate, the higher the multiple. *Note:* Add depreciation and amortization expenses to the formula for what is referred to as EBIT-DA.

□ *Replacement Value:* This method writes up all assets to their replacement value and then subtracts all liabilities. It can substantially increase a company's value and is principally used when selling a business to company executives or another company which wants to get into your line of business.

□ *Projected or Capitalized Earnings:* This method applies a present value rate of about 15% to the company's projected net income. Basically, it is *today's* value of a company's projected net income, usually over three to five years. The value can be adjusted to include depreciation and amortization expenses for a total *projected cash flow value*.

□ *Liquidation Value:* This value assumes liquidation of all company's assets and payment of all liabilities. It is used to determine the *absolute* minimum value of the business. *Example:* You might apply a 25% liquidation value to inventory, 70% to accounts receivable, 50% to equipment, etc. You then subtract all liabilities to determine the final liquidation value.

□ *Multiple of Sales Value:* This valuation method, principally used to value service businesses, applies a multiple of 0.75 to 1.50 to last year's sales, this year's projected sales, or an average of the last three years. *Example:* Your company's sales last year were \$850,000. Based on the higher multiple of 1.50, the value of the business is \$1,275,000. (*Note:* For the factors which affect the multiplier, see *Earnings Before Interest and Taxes*, above.)

Don't forget to adjust profits: The owners of closely held businesses have many

options to lower their company's taxable income. So, before applying any multiples, adjust the company's profits upward. Add back to pretax profits the *excess* salary and benefits paid to owners and other family members employed by the business. (*Excess* means above the industry's average for comparable companies the size of the company being analyzed.) To further increase a company's net book value (stockholders' equity), write up the reported book values of its equipment, real estate, and inventory to fair market value.

* * *

All of the values explained in this Report are used by stock brokers, investment analysts, and professional valuation experts. Knowing how to compute and compare them will help you better analyze *and* value *any* ownership position, including your own business or one you want to acquire. □

References:

Exhibit 1: How to Value Rosedale's Projected Earnings, see next page

Exhibit 2: Present Value Rates and Factors, page 14

Exhibit 3: Rate of Return Components, page 15

How to Value Rosedale’s Projected Earnings

Present value is *today’s* value of a dollar received or paid in *future* years. Present Value Rates and Factors are listed in *Exhibit 2*, page 14.

* * *

On page 6, we computed *Rosedale Products’* book value per share of \$7.10 — \$71,000 stockholders’ equity account divided by 10,000 shares of common stock outstanding.

Let’s now value *Rosedale’s* projected net income for five years and compare that value to the book value per share of \$7.10. The projected net income is *after* preferred stock dividends are paid. A 15% present value (PV) rate will be used to determine *today’s* value of the projected net income. *Note:* Last year’s net income was \$48,000 — \$50,000 less \$2,000 preferred stock dividend. Here are the five-year projections:

<u>Year</u>	<u>Projected Net Income</u>	x	<u>15% PV (Factor)</u>	=	<u>Value Today</u>
2007	\$ 83,000		0.870		\$ 72,210
2008	\$112,000		0.756		84,672
2009	\$140,000		0.658		92,120
2010	\$168,000		0.572		96,096
2011	\$200,000		0.497		<u>99,400</u>
			Value of Projections		<u>\$444,498</u>

Today’s value of *Rosedale’s* projected net income is \$444,498 — 6.3 times its book value of \$71,000. You can see how this method often produces the highest value for a business and why a company’s projected earnings play a big role in valuing its common stock.

Valuation note: If you were buying this business and felt that the projections were unrealistic, you could apply a higher present value rate, say 24%, to the earnings. That would lower today's value of the five-year projections. For example, if we use a 24% present value rate (factor of 0.341 for the fifth year in the Table on the prior page), the \$200,000 projected net income is worth only \$68,200 today versus \$99,400 using a 15% PV rate.

If you were to apply the 24% PV rate to all five years (factors of 0.806, 0.650, 0.524, 0.423, and 0.341), the value of *Rosedale Products* would be \$352,322 compared to \$444,498 using a 15% PV rate. That represents a \$92,176 lower value or 21% less money for the buyer and seller of this business.

The lesson: As a buyer or seller of a business, always compute *today's* value of the money to be paid or received over future years. □

Exhibit 2

Present Value Rates and Factors for \$1

Year	8%	10%	12%	14%	15%	16%	18%	20%	22%	24%	26%	28%	30%
1	0.926	0.909	0.893	0.877	0.870	0.862	0.847	0.833	0.820	0.806	0.794	0.781	0.769
2	0.857	0.826	0.797	0.769	0.756	0.743	0.718	0.694	0.672	0.650	0.630	0.610	0.592
3	0.794	0.751	0.712	0.675	0.658	0.641	0.609	0.579	0.551	0.524	0.500	0.477	0.455
4	0.735	0.683	0.636	0.592	0.572	0.552	0.516	0.482	0.451	0.423	0.397	0.373	0.350
5	0.681	0.621	0.567	0.519	0.497	0.476	0.437	0.402	0.370	0.341	0.315	0.291	0.269
6	0.630	0.564	0.507	0.456	0.432	0.410	0.370	0.335	0.303	0.275	0.250	0.227	0.207
7	0.583	0.513	0.452	0.400	0.376	0.354	0.314	0.279	0.249	0.222	0.198	0.178	0.159
8	0.540	0.467	0.404	0.351	0.327	0.305	0.266	0.233	0.204	0.179	0.157	0.139	0.123
9	0.500	0.424	0.361	0.308	0.284	0.263	0.226	0.194	0.167	0.144	0.125	0.108	0.094
10	0.463	0.386	0.322	0.270	0.247	0.227	0.191	0.162	0.137	0.116	0.099	0.085	0.073

Axiom. The greater the risk or uncertainty with any investment, the higher the annual return wanted and thus the higher the present value used. *Example:* If attaining a company's projections involves substantial uncertainties and risks, you may want to use a present value rate of 20% to 30% on the projected income stream. In contrast, if you are more certain of the projections (thus, less risk), you can use a lower present value rate, e.g., 12% to 18%. □

For Rate of Return Components, please see the next page.

Rate of Return Components

When deciding which annual return or present value rate to use on projected income or cash inflow (e.g., a 10%, 15%, or even a 30% rate of return), you must consider the following factors. All four have an impact on the annual return you select to use when evaluating investments and projected cash flow.

- Basic *returns* available in today's marketplace — i.e., alternative investment opportunities, such as the yields on triple-A bonds and certificates of deposit.
- The *risks* involved in obtaining the cash inflow — the greater the risk, the higher the annual return needed and thus the higher the present value rate used.
- *Inflation* — the dollars you receive or pay years from now are *not* worth the same as dollars received or paid *today*.
- *Liquidity* — the ability to promptly convert the asset into cash without any significant loss of principal. *Example:* A publicly held stock or bond can be sold the same day it is purchased. In contrast, an ownership position in a closely held business is *very* illiquid; it can't be readily sold and converted to cash.

Consider all of these factors when selecting the rate of return and present value rate to use when valuing a business or any projected income stream. □

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