

# The Value Analyst's Handbook

How to figure out Earnings Yield: EBIT/Enterprise Value

Earnings yield

## Enterprise Value The Price of a Business

This will be the first in a series of educational pieces on analyzing businesses. The purpose is for the reader to then apply the concepts and principles to his or her own investing. Begin and end with common sense—apply these concepts intelligently and don't take these words as gospel. Intelligent investing requires you to think for yourself. Hopefully, these lessons will give you the tools to search, analyze and invest with a margin of safety. Never cease to do your own thinking. Our goal should be to become the best investors each of us can become rather than wannabes and mimics of great investors though that is how *most of us* begin our journey.

Warren E. Buffett ("WEB") said there were only two things he would teach in his investing course:

1. How to think about prices.
2. How to value a business.

Ben Graham says investing is most intelligent when it is most business-like, so we will focus on analyzing businesses not stocks. If you want more encouragement for taking a business-like approach to investing, listen to what Warren Buffett and Charlie Munger said in the 1984 Berkshire Annual Report, "As you know, we buy marketable securities for our insurance companies based upon the criteria we would apply in the purchase of an entire business. This business-valuation approach is not widespread among professional money managers and is scorned by many academics. Nevertheless, it has served its followers well (to which academics seem to say, "Well, it may be all right in practice, but it will never work in theory.") Simply put, we feel that if we can buy small pieces of businesses with satisfactory underlying economics at a fraction of the per-share value of the entire business, something good is likely to happen to us--particularly if we own a group of such securities."

### ENTERPRISE VALUE ("EV")

So this lesson will be on: How do we determine the market price of a business? All the market price tells an investor is what he or she can buy or sell a share of stock (a piece of the business) for. The market price does not tell the investor whether that is a good or bad purchase or sale. Price is what you pay and value is what you get.

We will move from the simple to the more detailed and complex application of concepts while discussing the strengths and pitfalls of applying these principles. Common sense and experience will show you when the details are material. An analyst must acquire complete and accurate data before he or she can begin an analysis, but placing that information and analysis into context will be critical to success.

To figure out the market price of a business we calculate **Enterprise Value ("EV")** and **EBIT/EV** yield not Market Capitalization and Earnings/Price yield. "EBIT" is the acronym for earnings before interest and taxes or pre-tax operating earnings. EV/EBIT is frequently used in industries where capital expenditures are typically for maintenance purposes and close to depreciation and

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amortization expenses. Assume for discussion purposes that "EBIT" is equal to "EBITDA minus maintenance capital expenditures ("MCX") or earnings before interest, taxes, depreciation and amortization minus maintenance capital expenditures. A mouthful!

### OWNER EARNINGS

EBITDA – MCX is a pre-tax measure of “owner earnings” as described by Warren Buffett. This is the level of earnings which can be maintained on a steady, non-growth basis, after expenditures have been made to maintain the company’s plant and equipment as well as its competitive position.

Warren Buffett has referred to the ‘owner earnings’ of a company as the true measure of earnings. He has defined ‘**owner earnings**’ as:

Reported earnings + depreciation, amortization, other non-cash items - average annual amount of capitalized spending on plant, machinery, equipment.

#### *Depreciation is*

You should not consider depreciation because this is generally a fixed percentage of an amount spent in the past that does not necessarily reflect the true cost of replacing things when they are obsolete or .....(inflation caused under-depreciation—example.).

#### *Amortization*

Buffett has often criticized accounting amortization of economic goodwill. Economic goodwill, including brand name, reputation, monopolistic or market dominance, might actually increase in value rather than depreciate. (Sees’ Candies, for example)

### DETERMINING MAINTENANCE CAPITAL EXPENDITURES

It is difficult to estimate true capital spending. Items may be deferred or brought forward. **Averaging actual maintenance capex** (separated from growth capex) is a more reliable guide of a company’s true capital needs.

#### **How would you figure out what true maintenance capex would be?**

Maintenance Capex is the level of capex necessary to maintain the current level of sales and profits. Look at PPE/Sales ratio as another method to separate maintenance from growth capex. Companies generally report capital expenditures in their statement of cash flows. We assume that each year, a part of this outlay supports the business at its sales level for the prior year, and part is needed for whatever increase in sales it has achieved. Companies generally have a stable relationship between the level of sales and the amount of PPE, net of depreciation, that they report. We calculate the ratio of PPE to sales for each of the five prior years and find the average. We use this to indicate the dollars of PPE it takes to support each dollar of sales. We then multiply this ratio by the growth (or decrease) in sales dollars the company has achieved in the current year. The result of that calculation is growth capex. We then subtract it from total capex to arrive at maintenance capex. (Source: *Value Investing* by Greenwald).

Maintenance capex (MCX) is what it would take to keep earnings the same amount in the year you are looking at. What this says, don't fool yourself into thinking you have a better business than you think you have.

*For example, the company Six Flag has rides (Ferris Wheels, etc.):* Six Flags will deduct expenses for maintaining the Ferris-Wheel like repainting, replacing equipment, **but to remain competitive and attract customers at the same rate**, you have to replace the ride every 10 years. But here in this competitive situation, the management has to add two rides every year or else they will have declining revenues.

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**Consider this maintenance cap/ex not growth cap/ex because it is needed to maintain the current level of revenues.** You may disagree with his argument, but it is an argument to have.

Another example about defining Maint. Cap-Ex ("MCX"): You own a hotel business and it looks like MCX goes along every year, but it is not expanding. What is wrong with saying it is normalized after three years of average capex? The hotel business can bump along for 3, 5, 7 years without refurbishing charges and then you are hit with a big capex charge. You need to account for that. Normalize the big expenditures into the non-refurbishing years.

Going even a step further in your analysis of true maintenance capex, beware of calculating MCX on equipment that is or becomes obsolete! Warren Buffett gives an example of *Burlington Industries* making a capex decision by investing in new machines for production. Buffett says the payoff used to justify the maintenance capital expenditures would be false. That is a false payback period because everyone else buys the machine so the payback is almost never. Everyone else is doing that as well. **A commodity industry with big cap/ex requirements and competitive environment is a poor investment.** If you have a department store and you are in a competitive environment so you have to spend more to stay in place. Why he likes good businesses with a moat. All these things go into maintenance capex calculations. It is kind of an important question.

"What I like about the challenge of determining true MCX is that there is your chance to make some money. **If they told you the answer, then there would be no opportunity.**" (Joel Greenblatt)

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**The definition of Enterprise Value ("EV") or Total Enterprise Value ("TEV")** is the market-indicated value of a business adjusted to consider debt and cash. Calculate as follows:

Equity Value (market price of stock multiplied by the fully diluted shares outstanding) + Net Interest Bearing Debt = EV. Net Debt includes the current portion of debt minus the Excess Cash Balance (cash not needed in the ordinary course of business). This is the simple formula, but it must be applied with common sense.

### Calculating TEV

Price of a share: \$15

Fully Diluted Shares Outstanding: 1 million

Debt: \$5 million

Cash: \$2 million

Sales: \$30 million

Cash typically used in the business during the year: 2% of Sales or \$600,000. The operating cash balance can be determined by the company's operating history say over a five-to-ten year period and by looking at the cash balances of other companies in that particular industry.

Market Cap: \$15 share price times 1 million fully diluted shares outstanding = \$15 million

TEV = \$15 million market cap. plus \$5 million debt minus excess cash of (\$2 million - \$600,000) = \$15 mil. + \$5 mil. - \$1.4 mil. = **\$18.6 million.**

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## Why Use Enterprise Value ("EV")?

### Understand the importance of capital structure

Capital structure is the equity and debt financing of a company. It is often measured in terms of the relative magnitude of the various financing sources. A company's financial stability and risk of insolvency depend on its financing sources and the types and sizes of various assets it owns.

Below are a Typical Company's Asset Distribution and Capital Structure

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><b>Assets (Investing)</b></td> </tr> <tr> <td>Current Assets</td> </tr> <tr> <td>Long-term Investments</td> </tr> <tr> <td>PP&amp;E</td> </tr> <tr> <td>Tangible Assets</td> </tr> <tr> <td>Deferred Charges</td> </tr> </table>	<b>Assets (Investing)</b>	Current Assets	Long-term Investments	PP&E	Tangible Assets	Deferred Charges	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><b>Debt and Equity (Financing)</b></td> </tr> <tr> <td>Current Liabilities</td> </tr> <tr> <td>LT notes and bonds</td> </tr> <tr> <td>Subord. Notes and debentures</td> </tr> <tr> <td>Deferred credits</td> </tr> <tr> <td>Provisions and reserves</td> </tr> <tr> <td>Minority interests in consolidated subsidiaries</td> </tr> <tr> <td>Preferred Stock</td> </tr> <tr> <td>Capital stock equity and retained earnings</td> </tr> </table>	<b>Debt and Equity (Financing)</b>	Current Liabilities	LT notes and bonds	Subord. Notes and debentures	Deferred credits	Provisions and reserves	Minority interests in consolidated subsidiaries	Preferred Stock	Capital stock equity and retained earnings
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Equity capital refers to the risk capital of a company. **Characteristics of equity capital include its uncertain or unspecified return and its lack of any repayment pattern.** It is considered the permanent capital of the company. Unlike equity capital, both short term and long-term debt capital must be repaid. For investors in common stock, debt reflects a risk of loss of the investment, balanced by the potential of profits from financial leverage. For example, say a company has a debt to total capital ratio of 80% with \$80 in net debt and \$20 equity for a total enterprise value ("TEV") of \$100. If the market value of the total enterprise value rising by 10% to \$110 the equity value has risen by 50% to \$30 (\$110 of TEV - \$80 of debt = \$30 of equity). If the TEV drops by \$10 to \$90 (\$100 - \$10), equity drops by 50% to \$10 (TEV of \$90 - \$80 of debt = \$10 of equity). The leverage of debt cuts both ways for the equity holder.

We will always consider debt alongside the equity as part of the investment in the company. Using what is called the enterprise value approach. Since we take a business like approach to valuing businesses ignoring debt when considering the market price of the business makes no sense.

Below is a diagram of the relationship between equity and enterprise value

<b>Equity Value</b> (Market Cap)	Market value of debt net of excess cash	Minority interest	Pension provisions	Other Claims
Sum of the values of claims on enterprise profit or cash flows				
Total Enterprise Value				

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Cash, working cash, or operating cash, which is needed as a buffer to pay bills as they fall due, is an operating asset. This is non-interest bearing, in the form of cash on hand or in a checking account. Just as the firm needs to invest in plant and equipment to carry out operations, it also has to invest in working cash. However, interest bearing cash equivalents or cash invested in short term securities are **financial assets**—they are investments of excess cash over that required to meet liquidity demands. If the analyst knows the business well and the company lumps cash and cash equivalents together, the analyst might impute the required working cash (as a percentage of sales, say).

In the book, *Security Analysis on Wall Street* by Jeffrey C. Hooke, the author says that since you don't have control over the capital structure of the company, Price/Earnings (P/E) analysis is fine. The Company has the debt it has and you should just leave it at that. The great investor, *Joel Greenblatt* said using EV to EBIT is better than Price to Earnings because if the business is not being run effectively with the proper capital structure, someone will come in and do it. In other words, **capital structure is not immutable**. For example, investors such as Carl Icahn are pressuring companies like *Time Warner* to become less under-leveraged so they can return excess cash to shareholders.

EV/EBIT allows for pre-tax comparisons since companies may have differing tax rates, which allows for more of an *apples-to-apples* comparison among companies. If the investor does not take debt into consideration, he or she is making a mistake.

**Question 1:** Which company is cheaper based on the facts below?

### COMPANY A

\$10 EBIT

40% tax rate

\$6 in Net Income

P/E: 10

Net Debt is \$0

\$60 million Market Capitalization (10 P/E x \$6 in Net Income) or

Enterprise Value = \$60

### COMPANY B

\$10 EBIT

40% tax rate

**? in Net Income**

\$50 million in debt at 10% annual interest rate

P/E: 5

**EV =?**

Figure it out and then look at next page below to check your work

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Interest Expense = \$5 million (10% x \$50 million in debt)  
 \$5 million in pre-tax operating profit (\$10 million EBIT - \$5 million interest expense)  
 \$3 million in net income (\$5 million in pre-tax operating profit x (1 - 40% tax rate))  
 Market capitalization = \$15 million (5 P/E x \$3 million in net income)  
 Enterprise value = \$15 million in market cap + \$50 million in debt = **\$65 in EV**

Company A is cheaper with an EV of \$60 million and a PE of 10 while Company B has an EV of \$65 and a P/E of 5. **An investor must adjust for debt and cash along with calculating market capitalization to determine the total price for a business. EV analysis takes into account differences in debt ratios and tax rates while simple P/E analysis does not.**

Let's try another example:

**Why an investor should use Enterprise Value?** Consider 2 companies--*Co. A & Co. B*. They are the same company. However, Company B has \$50 per share in debt (at a 10% annual interest rate). Company A has no debt. Assume the going rate for the earnings stream represented by \$10 in EBIT is \$80 (8 x EBIT) for company in A & B's industry.

	Company A	Company B
<b>Sales</b>	\$100	\$100
<b>EBIT</b>	\$10	\$10
<b>In. Expense</b>	0	\$5
<b>Taxes</b>	\$4	\$2
<b>Net Income</b>	\$6	\$3

Try to figure out the next two questions without peeking at the table below.

**Question 1:** If Company A trades at \$80 per share, let's figure out its P/E, Price/Sales ratio, EV/Sales, EV/EBIT.

**Question 2:** If Company B trades at \$30 per share, let's figure out its P/E, P/S ratio, EV/Sales, EV/EBIT

Answers below:

	Company A @ \$80 per share	Company B @ \$30 per share
<b>P/E</b>	$\$80/\$6 = 13x$	$\$30/\$3 = 10x$
<b>Price/Sales</b>	$\$80/\$100 = 0.8x$	$\$30/\$100 = 0.3x$
<b>EV/Sales</b>	$\$80/\$100 = 0.8x$	$\$80/\$100 = 0.8x$
<b>EV/EBIT</b>	$\$80/\$10 = 8x$	$\$80/\$10 = 8x$

Company B's P/E appears lower and its price/sales ratio appears incredibly low. Since Company A and Company B have the same pre-tax, pre-interest earnings stream (EBIT of \$10/Sh) and since they are the same company, the different companies should really be worth the same to a buyer.

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Whether you pay \$3 for the company and owe \$5, or you pay \$8 and owe nothing, it is the same thing. Or whether you pay \$300,000 for a house and assume a \$500,000 mortgage or pay \$800,000 up front, it's the same to you. You can pay the \$800,000 in cash or take out your own \$500,000 mortgage and be in the same shape as buying the house with an existing mortgage.

The different capitalization skews P/E and P/S but EV takes into account the different debt levels and lets you compare the true earnings stream that can or can not be leveraged by a buyer.

We want to use EV as the value to divide into the operating cash flow of the company to give us the capitalization rate which is the pre-tax earnings on the entire investment. Because it includes both debt and the market value of the equity and uses earnings before interest payments, the cap rate allows comparison between companies with very different capital (debt and equity) structures.

### PITFALLS OF THE EV METRIC

#### CASH --

Once you understand why EV is the proper metric to use, what are the pitfalls?

It is standard practice to reduce EV by excess cash balances. The rationale for this is that the decision by the firm to hold cash rather than pay down debt is a strategic financial decision. For example, consider two firms that, for hypothetical purposes, have exactly the same intrinsic EV. The management of Firm X wants to appear to have strong liquidity and thus holds a large cash balance over the quarter-end reporting date. The management of Firm Y wants to show that it has relatively less leverage and thus uses all available cash to pay down a working capital line on the last day of the quarter. If no adjustment for cash is made, Firm Y would appear to have a higher EV even though, per our assumption, they are equal.

Netting debt by all cash may not always be appropriate, however. First, the subtraction of all cash from the EV may not be considerate of the practical needs of the business. Firms need ready liquidity to function and pay their bills. For example, a retailer may need larger cash balances in their point of sale registers during Christmas. Second, while most liquidity needs can be handled with a working line of credit, such lines are not universally available to all types of businesses and do entail costs. So, just as not using cash to pay down debt can be viewed as a strategic decision, not having a working capital line of credit can be viewed as a strategic decision. In the latter case, there may be no practical option but to maintain a certain amount of working capital in the form of cash. Thus, like most general rules, judgment is required in specific situations.

*Bruce C.N. Greenwald* in his book, *Value Investing from Graham to Buffett and Beyond*, writes on page 92, **we estimate that the cash most businesses need to run their operations amounts to about one (1) percent of sales**..... An investor can look at the company's average cash balance over five years or look at the cash balances of similar companies in the company's particular industry and come to a conclusion as to what percentage to exclude from "excess" cash (or move a certain percentage or amount from excess cash into working capital) that will be deducted from EV.

Cash is easy to see on the balance sheet, but that is not the end of your analysis. For example, take a company with a \$7 per share market capitalization (\$700 million divided by 100 million fully diluted outstanding shares) and the company has \$500 million in cash with no debt, thus the company has \$5 per share in net cash and an EV of \$2 (\$7 per share in market capitalization minus \$5 per share in cash). Do not get too excited because the cash is not in your pocket so what you have to determine, based on the history of management's capital allocation skills and results, the

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history of the company, the opportunities in their industry, is what is going to happen to that cash? If the stock is below its intrinsic value, one of the things management could do with the cash is buy-back stock and accrete value to the remaining shareholders by shrinking the capitalization of the company or increasing their shareholders proportional ownership of the company. That would be a good use of cash assuming the stock was undervalued. The company could go on an acquisition binge, and you may or may not like that since takeovers can end in failure, or you might think that cash will be dissipated. You as an investor have to determine how management will deploy the company's excess cash. As a passive, outside shareholder the cash is not in your pocket.

Though you see the cash--mathematically it is \$5per share--on the balance sheet, you need to determine what that cash is worth to you, the investor. If you think they can grow their business with that cash like buy an add-on type of business or if they are buying back stock, you may give the cash full value. Or the company may sit on the cash and only earn 1% or 2% a year, so you discount the cash on the balance sheet. Generally, an investor can look at that \$5 on the balance sheet and say, "how much is it worth to me?" You may value it as low as \$1 or \$2 per share or at full value of \$5 per share in our example.

**Don't just take the \$5 at face value.** If it were all mathematically simple, the opportunities wouldn't be as great.

To go a step further in our analysis, there is another flaw when you use Enterprise Value. In our example above, say we estimate that EV can increase to \$3 from \$2 within the next two years for a 22.5% compounded annual return. Not bad? However, as investors we have to shell out \$5 per share for the cash per share plus the \$2 EV, paying \$7 in total which, if we are correct, we will be able to sell at \$8 per share in two years as the EV increases from \$2 to \$3 per share. We are not compounding our capital at the 22.5 annual returns but at a 6.91% annual compounded return since we pay \$7 per share and sell at \$8 after two years--not so great.

To summarize: you estimate that EV will be worth \$3 or 50% higher (\$2 a conservative 50% discount to \$3). So you can lay out \$2 in EV and have something at \$3 in value. What is wrong with that analysis? You can't immediately unlock the value of the excess cash and you have to pay full price for that cash in the total price that you pay for the shares.

Also, a bad management may fritter away the excess cash so you may have to haircut your estimate of excess cash.

Back to example: EV is \$2 and you value it at \$3, however if you value the cash at par you are putting a big weight on the \$5 in cash. You are laying out \$5 now for a future return and you may have to wait 2 or 3 years. So  $\$5 + \$2 = \$7$  -----going to  $\$3 + \$5 = \$8$ . The \$5 could be dead money so there is less upside. Note your opportunity costs.

### EQUITY--

If the firm being analyzed is in financial distress, the threshold issue is whether it is relevant to even consider the equity. The market value of financially distressed companies may be fairly meaningless when it trades at a very low nominal value (less than \$1 per share) or the debt in the capital structure trades at a significant discount. If the debt is trading at a discount, it may be more accurate to use the market value of the debt to estimate EV. If the equity is to be counted, which is always the case with financially sound companies; the number of shares to include in the calculation should be considered. Most of the time it will be appropriate to use the number of shares between primary and fully diluted shares. The investor may need to adjust the share number for common share equivalents ("CSEs"). A typical example would be warrants or options with

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exercise prices considerably below (or "in the money") current market values. When adding such securities to the share account, you must adjust EV to reflect the amount the firm would receive as a result of their exercise. You would most likely be to the share count while subtracting the cash received upon exercise of options from the EV. Preferred stock should be treated as a debt security and valued at its aggregate liquidation value (with appropriate adjustment for accrued but unpaid dividends).

For example: A company with a complex capital structure includes potentially dilutive securities. Options and warrants are always CSEs since their conversion feature is the sole basis for their value.

One Million Options on common stock, issued Dec. 31, 2004

<b>Number of Shares</b>	<b>1,000,000</b>
<b>Exercise Price</b>	<b>\$25.00</b>
<b>Year End Price Dec. 31, 2005</b>	<b>\$31.00</b>
<b>Conversion adds</b>	<b>\$25,000,000.00 in cash</b>

For a Company that has 100 million shares trading at \$31 per share and \$500 million in cash for an Enterprise Value of \$2,600 million (\$3,100 million minus \$500 million in cash) or \$26 per share (\$2,600 million divided by 100 million shares).

Add 1 million shares from the conversion of options into shares to 100 million shares for a total of 101 million fully diluted outstanding shares and add \$25 million in cash from the exercise of options to \$500 million in cash for a total of \$525 million in cash.

The adjusted enterprise value is \$31 per share in market value x 101 million fully diluted outstanding shares ("FDOS") = \$3,131 million in market capitalization minus \$525 in cash for an enterprise value of \$2,606 million or \$26.06 per share. The addition of CSEs increased the EV by \$6 million (\$31 million in additional market capitalization due to 1 million in additional shares from options being converted into shares minus additional cash of \$25 million from option conversion at the \$25 per share strike price x 1 million shares) or 6 cents per share.

### DEBT --

Debt typically should be valued as shown on the Generally Accepted Accounting Principles ("GAAP") balance sheet. **There are at least three exceptions to this rule.** First, if the debt is convertible, it should generally be valued as debt (this applies to convertible preferred stock as well) unless the security's conversion feature is "in the money", thus it may be more appropriate to treat it as a CSE, but care should be taken to ensure that there is no double counting of shares if the CSE method has been used as a result of using the fully diluted share count. Second, and this is very limited exception, if the debt is the obligation of a firm that has previously gone through a chapter 11 reorganization and is accounted for using "fresh-start" accounting principles (which value the debt at a discounted rate), then the face or full principal amount of the debt is more appropriate.

If the firm is in financial distress, then it may be more appropriate to value the debt using market prices as opposed to its balance sheet value. Thus, if there is \$200 in debt but it is trading at \$40, then it may be more appropriate to value it at \$80 instead of \$200.

Special care should be taken when the debt in question was structured and issued as discount debt. Discount debt is a debt obligation that is intentionally structured with a coupon rate (which can be

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payable for a specified portion or the entire life of the bond) significantly below the yield required by the market for the bond to trade at par. Because of the below-market coupon (which can often be 0% or less than 5% for a credit that might require a coupon greater than 10%), the bond is initially sold at a discount (the discount determined by the appropriate "market" interest rate) but is paid off at par. Such debt structures are frequently used in start-up companies that are not expected to generate sufficient cash flow in their early years of operation to pay interest at market rates. It has also been popular for established companies to issue long-maturity, deep-discount 0% coupon convertible securities that are often initially sold at steep discounts (e.g., 40%) to face.

Under GAAP, discount debt is initially carried on the balance sheet at approximately the price sold and then "accretes to par value based on the internal rate of return represented by the original issue discount adjusted by the coupon for life or a specified number of years, after which the bond begins paying interest at a higher "market" rate. This latter structure is known as a "step-up" or "split coupon" bond. A hypothetical 10-year split-coupon bond might pay no interest for the first 5 years and then pay 12% interest for the last 5 years (split coupons such as this are often designated "0/12"). This bond is likely to have been issued at a price equal to the present value of \$1000 (standard bond denomination) discounted by 12% for five years of \$567, representing a trading value of 56.7. At the end of two years, it will be carried on the issuer's balance sheet at an amount representing the present value discounting for three years (the time remaining until it turns "cash pay"), or 71.2. The Table below shows the basic accounting treatment of the 0/12 split-coupon bond just described

Period	0	1	2	3	4	5	6	7	8	9	10
Balance Sheet	56.7	63.6	71.2	79.7	89.3	100.0	100.0	100.0	100.0	100.0	100.0
Carrying Value											
Int. Exp. Accrued		6.8	7.6	8.5	9.6	10.7					
Int. Exp. Paid							12.0	12.0	12.0	12.0	12.0

When valuing discount securities, for the purposes of estimating EV it is important to note that the market trading convention is to quote the trading price as a percentage of face or full principal value. Thus, if after two years the 0/12 was trading at 65, this would mean it was trading at \$650 or 65% of the \$1,000 face amount. Its accreted or carrying value was calculated to be 71.2, and thus its trading price as a percentage of accreted value is 91.3%. The trading price as a percentage of accreted value is important to note because, as in this example, it can give important insight as to whether the debt is trading as if the firm is in financial distress. Here the debt had a market price of 65, which normally can be an indication of financial distress. However, when trading at only a modest discount and the firm is apparently not perceived as being in financial distress and at market value if the issues are considered distressed. (Source: Distressed Debt Analysis: Strategies for Speculative Investors by Stephen G. Moyer)

### SUMMARY

We want to use enterprise value (EV) to determine the market price of a business. To calculate EV we would take the market capitalization of the firm and then add in debt and subtract excess cash. Using EV considers the capital structure of the company and allows for easier comparison among firms. If the company has a complex capital structure, remember to add in the extra shares to arrive at fully diluted shares outstanding when figuring the company's market capitalization then subtract from EV the cash received from conversion of CSEs into shares.

If the company has large excess cash balance, be sure to adjust for what you believe will happen to the cash. Be prepared to place a discount on the company's cash balance if management has poor capital allocation skills. Allow for some cash to be used for normal working capital purposes.

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Finally, if the company has distressed debt, use market value rather than the full face-amount of that debt when calculating the net debt amount.

Why go into excruciating detail to calculate a simple metric like EV and EBIT? An analyst must be complete, accurate and thorough because there are times when the details will have a material impact on your valuation and, thus, your investment results.

**END**