Table of Contents – Equity Value and Enterprise Value Questions & Answers

Overview and Key Rules of Thumb

If you want to **value** companies and model transactions, you need to understand **Equity Value** and **Enterprise Value** first.

This is the shortest technical section of the interview guide because there aren't that many questions they could ask you on this topic – at least, not compared to the number of possible questions on accounting, valuation, DCFs, merger models, and LBO models.

But the **concepts** here and the key rules of thumb are very important to understand. If you get them right, you'll understand the later technical sections in this guide more effectively as well.

Just as with the other technical sections, we're going to start with the **concepts and key rules of thumb** and then move onto the 3 main categories of questions you could get:

1. **Basic Conceptual Questions** ("What's the difference between Equity Value and Enterprise Value?")
2. **More Advanced Conceptual Questions** ("Why would you subtract the value of Net Operating Losses when calculating Enterprise Value?")
3. **Calculation Questions** ("A company has 100 basic shares outstanding. Calculate its diluted shares outstanding if it has…")

Let's get started with the key rules first:

Key Rule #1: Equity Value and What It Means

Equity Value, otherwise known as Market Capitalization or Market Cap, just means: Share Price of Company * Total Number of Shares.

At a basic level it answers a simple question: "How much is this company worth?"

Equity Value Calculations:	
Share Price:	$ 10.00
Basic Shares Outstanding:	1,000
Basic Equity Value:	$ 10,000

If you have 1,000 shares outstanding and each one is worth $10.00, for example, you're worth $10.00 * 1,000, or $10,000.

Most public companies are worth hundreds of millions or billions of US Dollars. When you read about "a $10 billion company" in the news, usually the "$10 billion" refers to the **Equity Value** of the company.

There is nothing complicated about determining a company's share price; calculating the total number of shares can require more work, because there's **Basic Equity Value** and **Diluted Equity Value**, which we'll get into in Key Rule #3 below.

Key Rule #2: Enterprise Value and What It Means

If you compare buying a company to buying a house, **Equity Value** is like the "sticker price."

You're driving by and you see a nice house… or a nice company… how much does it cost to buy it?

Well, according to the sign on the front lawn, it's on sale for $500,000. And in the same way, maybe the company's **Equity Value** is $500 million (50 million shares * $10.00 per share).

But is that the *true* price to buy the house – or the company?

Nope!

There are additional items that might *push up* the effective price afterward, or possibly *push down* the effective price. For a house, these might be:

- The previous owner left lots of **furniture** – we can save some money!
- We need to make significant **repairs** or improve the landscaping.
- There are **unpaid bills** or other obligations that we need to pay off.

So the **actual cost** of buying that house may be much different from the sticker price.

In the same way, the **actual cost** of buying a company may also be much different from its "sticker price" – its Equity Value:

- The company might have **Debt** that needs to be repaid upon acquisition.
- The company might have **Excess Cash** that we can claim for ourselves.
- The company might have **Unfunded Pension Obligations** and other Liabilities that we'll have to repay at some point.

To take into account all of those, we calculate **Enterprise Value**.

Think of it like this: **Enterprise Value** = Equity Value + Debt, Debt-Like Items and Other Obligations – Cash, Cash-Like Items, and Anything That Saves Us Money.

Essentially we **add** anything that we're going to have to set aside funds to pay off in the future, and **subtract** anything that can save us money in the future.

Enterprise Value Calculations:	
Diluted Equity Value:	$ 1,225,000
Less: Cash & Cash-Equivalents:	(50,000)
Plus: Debt:	100,000
Plus: Convertible Bonds:	-
Plus: Noncontrolling Interests:	30,000
Plus: Preferred Stock	20,000
Enterprise Value:	**$ 1,325,000**

A more precise definition would be: **Enterprise Value** = Equity Value + Debt + Preferred Stock + Noncontrolling Interests – Cash & Cash-Equivalents.

We'll discuss each of those items and why they get added or subtracted, as well as a few more advanced items, in Key Rule #4 below.

Key Rule #3: Diluted Shares Outstanding

Calculating the exact number of shares a company has can be tricky due to **dilutive securities**.

A security is "dilutive" if it could *potentially* create more shares. The best example is a **call option**, which gives someone (usually an employee) the ability to pay the company money and get a newly created share in return.

Let's say that a company's stock is worth $10.00 per share right now. It has also issued **call options** to employees that have **exercise prices** of $5.00 per share. In other words, employees can pay the company $5.00, and in exchange, receive one (1) share that's worth $10.00 each time it pays the company $5.00.

Of course, these options might also be **out-of-the-money** – for example, if the exercise price is $15.00 rather than $5.00, the options can't be exercised until the stock price hits $15.00 per share.

If employees have **in-the-money** options, why would they wait to exercise them?

One reason is the **expectations of future value**. If they think that the share price will rise to $20.00 next week, they'll most likely hold onto their options. Also, employees may be restricted from exercising their options depending on how long they've worked at the company in question.

But the **potential** for additional shares is always there… and that is what we care about when calculating the **diluted shares** for a company.

To calculate the impact of **diluted shares**, you use the **Treasury Stock Method:** you assume that the new shares get created when options are exercised, and that the company then *buys back* some of those new shares with the funds it receives.

Simple Example: Let's say that the company's share price is $10.00 and that 100 options were issued at $5.00 exercise prices.

The option holders exercise those options and get 100 shares – and the company receives $500 in cash as a result.

Diluted Shares Calculations:			
Share Price:	$ 10.00		
		Exercise or Conversion	
Security Name:	Number:	Price:	Dilution:
Options:	100	$ 5.00	50

Since its share price is $10.00, it can therefore buy back 50 shares with the proceeds. So as a result, there are **50 additional shares outstanding** and the diluted share count goes up by 50.

With the Treasury Stock Method (TSM), you assume that **all** in-the-money options contribute to dilution.

Options are the most common dilutive securities, but there are others:

Diluted Shares Calculations:					
	Dollar	Par		Exercise or Conversion	
Security Name:	Amount:	Value:	Number:	Price:	Dilution:
Options:	N/A	N/A	500	$ 50.00	250
Convertible Bonds:	$ 100,000	$ 1,000.00	100	$ 50.00	2,000
Convertible Preferred:	$ 50,000	$ 1,000.00	50	$ 80.00	625
RSUs:	N/A	N/A	200	N/A	200
Performance Shares:	N/A	N/A	200	$ 75.00	200
Total Dilution:					3,275

- **Warrants:** The treatment is similar to options; use the Treasury Stock Method.
- **Convertible Bonds:** Treatment is "either or" – they count as debt, *or* count 100% as additional shares, with no Treasury Stock Method involved – see the Calculations questions below for an example.
- **Convertible Preferred Stock:** The same as the treatment above for Convertibles.
- **Restricted Stock Units:** These are a straight addition – there are no exercise prices or conversion prices to worry about.
- **Performance Shares:** If the stock price is above a certain level, they count as additional shares; otherwise, they count as nothing.

Why bother with this extra math to calculate the **Diluted Equity Value** of a company?

For the same reason we calculate **Enterprise Value:** to see what it would *really* cost to acquire a company.

When you buy another company, the purchase agreement normally states that any **in-the-money** dilutive securities get cashed out or get converted into an equivalent number of the buyer's securities. Either of those scenarios would **cost** the buyer something when it acquires the company in question.

So it's more accurate to calculate the **Diluted Equity Value** when you're determining the Enterprise Value – otherwise you're underestimating how much the company would truly cost to acquire.

Key Rule #4: Items That Go Into Enterprise Value

In this section, we're going to cover the more common items that are added and subtracted when calculating Enterprise Value (i.e. when you start with Equity Value, and then add and subtract items to better approximate a company's true value).

- **When Do You *Subtract* an Item?** Normally when it **saves you money** or potentially gives you extra cash, either immediately or in the long-term.
- **When Do You *Add* an Item?** Normally 1) When it represents something that must be paid *immediately* upon acquiring the company (e.g. Debt), or 2) When it's something that must be repaid in the future, but wouldn't come from the company's normal cash flows (e.g. Unfunded Pension Obligations); or 3) When you're adding it back for **comparability** purposes (e.g. Noncontrolling Interests).

Here are a few examples of items that you would **subtract:**

- **Cash:** This saves you cash right away because it's yours once you buy the company; technically you should only subtract *excess* cash (i.e. the amount over the minimum they need to operate) but normally you subtract the entire amount.

- **(Potentially) Short-Term, Long-Term, and Equity Investments:** You could sell these investments in the future and get extra cash, so sometimes they're also subtracted – depending on how liquid they are.
- **Net Operating Losses:** These could potentially save you cash as future tax deductions, so *sometimes* they are factored in (standards vary widely).

Now let's go through a few examples of items that you **add** because they normally require immediate repayment in an acquisition scenario:

- **Debt:** It's added because the acquirer normally has to repay it upon completing the acquisition.
- **Preferred Stock:** It's similar to Debt because of the required dividends, which act as interest expense; also, normally it must also be repaid upon acquisition.

Then there are items that get added because they must be repaid in the future, but *wouldn't* necessarily come from the company's normal cash flows:

- **Unfunded Pension Obligations:** This is a big one for certain types of companies (e.g. auto manufacturers). If they have nowhere near enough cash flow from normal business operations to pay for these, they'll need to get the money from somewhere… which means that the buyer is paying, or that they're raising debt to pay for them.

Enterprise Value Calculations:	
Diluted Equity Value:	$ 1,327,500
Less: Cash & Cash-Equivalents:	(50,000)
Less: Equity Investments:	(10,000)
Less: Value of NOLs:	(5,000)
Plus: Debt:	100,000
Plus: Convertible Bonds:	-
Plus: Convertible Preferred Stock:	-
Plus: Noncontrolling Interests:	30,000
Plus: Preferred Stock	20,000
Plus: Unfunded Pension Obligations:	50,000
Plus: Capital Leases:	35,000
Plus: Restructuring Liabilities:	10,000
Enterprise Value:	**$ 1,507,500**

- **Capital Leases:** These are "Debt-like items" and sometimes you have to repay these leases in an acquisition; similar to Unfunded Pension Obligations, often you add them because the funds from ordinary business operations are insufficient to repay these.
- **Restructuring / Environmental Liabilities:** The logic is similar to the points above – these must be paid in the future to cover obligations that

the company owes, and if they're significant the company probably *won't* be able to cover them with its normal cash flow.

There's only one common item in the final category – items that you add back for comparability purposes:

- **Noncontrolling Interests (AKA Minority Interests):** You add these because when you own over 50% of another company, **you consolidate 100% of its financial statements with your own**. But Equity Value only reflects the value of the percentage that you *own*, not 100%. So you need to reflect *100%* of that other company in Enterprise Value – if you did not add Noncontrolling Interests, you would only be reflecting 60%, or 70%, or however much you own.

Let's say that your revenue is $100, and you own 70% of another company that has $50 in revenue. On your statements, you show $150 in revenue because you consolidate 100% of the statements (see the Accounting section of the guide).

But Equity Value, by itself, only reflects the **70%** of the other company that you own. An Enterprise Value / Revenue multiple would be wrong because we would have 100% of the other company's *revenue*, but only 70% of its *value*.

As a result, we need to add the Noncontrolling Interests line item that reflects the 30% we *do not* own – that way, we're including **100%** of the other company's value in Enterprise Value.

Do you need to know all the explanations above in an interview?

No, not really – these more advanced items are unlikely to come up in entry-level interviews. But it's good to have some intuition behind why items get added or subtracted when calculating Enterprise Value.

Key Rule #5: Which One to Use?

With this last rule, we move into **Valuation** territory – which is technically the next section of the guide.

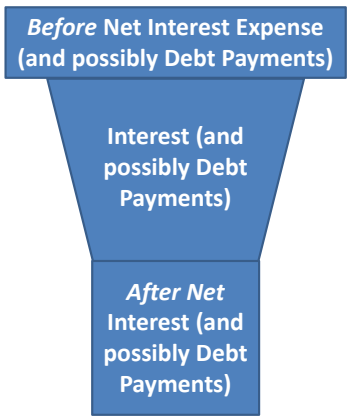
You will almost always calculate *both* Equity Value and Enterprise Value for a company. In fact, you need to calculate Equity Value before you can even calculate Enterprise Value.

The only exception is that in some industries, such as commercial banking and insurance, **only** Equity Value is meaningful – see the industry-specific guides for more on those.

So it's not a question of "Which one is more useful?" since you'll almost always look at both. The real questions: **What do they mean** and **when do you use each one**?

We've already covered what they mean: Equity Value is like the "sticker price" and Enterprise Value is how much the company would *actually* cost to acquire.

Their usage depends on **what's in the denominator** when calculating valuation multiples.



If the denominator **includes interest income and expense**, you use Equity Value; if it is **does *not* include interest income and expense**, you use Enterprise Value.

Think of a company's cash flow like a **funnel:** at the top, before any interest (or debt principal) is paid, that cash flow is available to *both* Equity and Debt investors, and so it therefore corresponds to Enterprise Value.

Whereas *after* interest (and possibly debt principal) is paid, now the Debt investors are entitled to nothing and everything remaining *only* goes to the Equity Investors.

Here's a list of the key metrics you could use in the **denominator** of valuation multiples, along with what you should use in the numerator:

Multiple Name:
Enterprise Value / Revenue:
Enterprise Value / EBITDA:
Enterprise Value / EBIT:
Equity Value / Net Income (P / E):
Enterprise Value / FCFF:
Equity Value / FCFE:

- **Revenue:** Enterprise Value
- **EBIT or Operating Income:** Enterprise Value
- **EBITDA:** Enterprise Value
- **Net Income (EPS):** Equity Value (Per Share Price)
- **Unlevered Free Cash Flow (Free Cash Flow to Firm):** Enterprise Value
- **Levered Free Cash Flow (Free Cash Flow to Equity):** Equity Value

There are more valuation multiples, but the ones above are the more common ones.

When in doubt, think: "Does this **include** interest income and expense, i.e. do we *subtract* interest expense and *add* interest income to get to this metric?"

If it does, use Equity Value; if it does *not*, use Enterprise Value.

For Further Learning

The rules above are a great start, but sometimes you need more: if you're in this position, click here to check out our Financial Modeling Fundamentals course.

You receive a $50 discount as a *Breaking Into Wall Street* member, and you get 20 hours of video tutorials along with several **bonus case studies** on real M&A deals and leveraged buyouts.

It has been one of our most popular courses year after year, and it's a great way to extend your knowledge of accounting, valuation, Equity Value and Enterprise Value, and prepare even more for interviews.

Equity Value & Enterprise Value Model

This one is not a full "model," but it is a very useful Excel file that will show you how these concepts work in practice, and the different items that go into calculating Equity Value and Enterprise Value.

There's a "Basic" tab that lists the important items to know for entry-level interviews, and then an "Advanced" tab that gives more detail and shows some other possible additions when calculating Enterprise Value.

You can get the full model right here:

- Equity Value and Enterprise Value Calculation Model

Equity Value & Enterprise Interactive Quiz

We've also included two interactive quizzes in this section of the guide – they're shorter than some of the other ones because there's not as much to say about Equity Value and Enterprise Value.

But it's still good to take one or both quizzes and refresh yourself on these concepts, especially if you haven't fully understood why and how you use them differently for valuation purposes.

- Basic Equity Value and Enterprise Value Quiz
- Advanced Equity Value and Enterprise Value Quiz

Equity Value and Enterprise Value Questions & Answers

Equity Value and Enterprise Value questions are straightforward. In the short summary above, we've been over 99% of what they could ask you about in interviews.

The only substantial topics *not* covered above are related to specific industries, so please see the industry-specific guides for discussions of those.

Conceptual Questions – Basic

1. Why do we look at both Enterprise Value and Equity Value?

Enterprise Value represents the value of the company that is attributable to all investors; Equity Value only represents the portion available to shareholders (equity investors).

You look at both because Equity Value is the number the public-at-large sees ("the sticker price"), while Enterprise Value represents its true value, i.e. what it would really cost to acquire.

2. How do you use Equity Value and Enterprise Value differently?

Equity Value gives you a general idea of how much a company is worth; Enterprise Value tells you, more specifically, how much it would cost to acquire.

Also, you use them differently depending on the valuation multiple you're calculating. If the denominator of the multiple **includes** interest income and expense (e.g. Net Income), you use **Equity Value**; otherwise, if it does **not** (e.g. EBITDA), you use **Enterprise Value**.

3. What's the formula for Enterprise Value?

Enterprise Value = Equity Value + Debt + Preferred Stock + Noncontrolling Interests – Cash

This is a "simplified" formula that you can usually get away with in interviews – for a more complete version see the More Advanced questions below.

4. Why do you need to add Noncontrolling Interests to Enterprise Value?

Whenever a company owns over 50% of another company, it is required to report 100% of the financial performance of the other company as part of its own performance.

So even though it doesn't *own* 100%, it *reports* 100% of the majority-owned subsidiary's financial performance.

You must add the Noncontrolling Interest to get to Enterprise Value so that your numerator and denominator both reflect 100% of the majority-owned subsidiary.

If you did not do that, the numerator would reflect less than 100% of the company, but the denominator would reflect 100%.

5. How do you calculate diluted shares and Diluted Equity Value?

Take the basic share count and add in the dilutive effect of stock options and any other dilutive securities, such as warrants, convertible debt, and convertible preferred stock.

To calculate the dilutive effect of options and warrants, you use the Treasury Stock Method (see the Calculations questions below).

6. Why do we bother calculating share dilution? Does it even make much of a difference?

We do it for the same reason we calculate Enterprise Value: to more accurately determine the cost of acquiring a company.

Normally in an acquisition scenario, **in-the-money securities** (ones that will cause additional shares to be created) are 1) Cashed out and paid by the buyer (raising the purchase price), or 2) Are converted into equivalent securities for the buyer (also raising the effective price for the buyer).

Dilution doesn't always make a big difference, but it can be as high as 5-10% (or more) so you definitely want to capture that.

7. Why do you subtract Cash in the formula for Enterprise Value? Is that always accurate?

In an acquisition, the buyer would "get" the cash of the seller, so it effectively pays less for the company based on how large its cash balance is. Remember, Enterprise Value tells us how much you'd effectively have to "pay" to acquire another company.

It's not always accurate because technically you should subtract only *excess* cash – the amount of cash a company has *above* the minimum cash it requires to operate.

But in practice, the minimum cash required by a company is difficult to determine; also, you want the Enterprise Value calculation to be relatively standardized among different companies, so you normally just subtract the entire cash balance.

8. Is it always accurate to add Debt to Equity Value when calculating Enterprise Value?

In most cases, yes, because the terms of a Debt issuance usually state that Debt *must* be repaid in an acquisition. And a buyer usually pays off a seller's Debt, so it is accurate to say that Debt "adds" to the purchase price.

Adding Debt is also partially a matter of standardizing the Enterprise Value calculation among different companies: if you added it for some and didn't add

it for others, EV would no longer mean the same thing and valuation multiples would be off.

9. Could a company have a negative Enterprise Value? What does that mean?

Yes. It means that the company has an extremely large cash balance, or an extremely low market capitalization (or both). You often see it with companies on the brink of bankruptcy, and sometimes also with companies that have enormous cash balances.

10. Could a company have a negative Equity Value? What would that mean?

No. This is not possible because you cannot have a negative share count and you cannot have a negative share price.

11. Why do we add Preferred Stock to get to Enterprise Value?

Preferred Stock pays out a fixed dividend, and Preferred Shareholders also have a higher claim to a company's assets than equity investors do. As a result, it is more similar to Debt than common stock. Also, just like Debt, typically Preferred Stock must be repaid in an acquisition scenario.

12. How do you factor in Convertible Bonds into the Enterprise Value calculation?

If the convertible bonds are **in-the-money**, meaning that the conversion price of the bonds is below the current share price, then you count them as additional dilution to the Equity Value (no Treasury Stock Method required – just add *all* the shares that would be created as a result of the bonds).

If the Convertible Bonds are out-of-the-money, then you count the face value of the convertibles as part of the company's Debt.

See the "Calculations" section for an example of how to do the math.

13. What's the difference between Equity Value and Shareholders' Equity?

Equity Value is the **market value** and Shareholders' Equity is the **book value**. Equity Value could never be negative because shares outstanding and share prices can never be negative, whereas Shareholders' Equity could be positive, negative, or 0.

For healthy companies, Equity Value usually far exceeds Shareholders' Equity because the market value of a company's stock is worth far more than its paper value. In some industries (e.g. commercial banks and insurance firms), Equity Value and Shareholders' Equity tend to be very close.

14. Should you use Enterprise Value or Equity Value with Net Income when calculating valuation multiples?

Since Net Income **includes** the impact of interest income and interest expense, you always use Equity Value.

15. Why do you use Enterprise Value for Unlevered Free Cash Flow multiples, but Equity Value for Levered Free Cash Flow multiples? Don't they both just measure cash flow?

They both measure cash flow, but Unlevered Free Cash Flow (Free Cash Flow to Firm) *excludes* interest income and interest expense (and mandatory debt repayments), whereas Levered Free Cash Flow *includes* interest income and interest expense (and mandatory debt repayments), meaning that only **Equity Investors** are entitled to that cash flow (see the funnel diagram above).

Therefore, you use Equity Value for Levered Free Cash Flow and Enterprise Value for Unlevered Free Cash Flow.

16. Let's say we create a brand-new operating metric for a company that approximates its cash flow. Should we use Enterprise Value or Equity Value in the numerator when creating a valuation multiple based on this metric?

It depends on whether or not this new metric includes the impact of interest income and interest expense. If it does, you use Equity Value. If it does not, you use Enterprise Value… starting to notice a pattern here?

Conceptual Questions – More Advanced

These questions are unlikely to come up in entry-level interviews, so **skip them unless you have significant full-time work experience in finance**.

In this set of questions, we go into more detail on advanced additions to Enterprise Value, as well as additional types of dilutive securities.

1. Can you describe a few of the additional items that might be a part of Enterprise Value, beyond Cash, Debt, Preferred Stock, and Noncontrolling Interests, and explain whether you add or subtract each one?

See the Key Rules of Thumb section above for more detail – here's a summary:

Items That May Be Counted as Cash-Like Items and Subtracted:

- **Net Operating Losses** – Because you can use these to reduce future taxes; may or may not be true depending on the company and deal.
- **Short-Term and Long-Term Investments** – Because theoretically you can sell these off and get extra cash. May not be true if they're illiquid.
- **Equity Investments** – Any investments in other companies where you own between 20% and 50%; this one is also partially for **comparability** purposes since revenue and profit from these investments shows up in the company's Net Income, but *not* in EBIT, EBITDA, and Revenue (see the Accounting section).

Items That May Be Counted as Debt-Like Items and Added:

- **Capital Leases** – Like Debt, these have interest payments and may need to be repaid.

- **(Some) Operating Leases** – Sometimes you need to convert Operating Leases to Capital Leases and add them as well, if they meet the criteria for qualifying as Capital Leases (see the Accounting section).
- **Unfunded Pension Obligations** – These are usually paid with something *other* than the company's normal cash flows, and they may be extremely large.
- **Restructuring / Environmental Liabilities** – Similar logic to Unfunded Pension Obligations.

Note that **many of these items are discretionary**.

Everyone agrees that Cash should be subtracted and Debt should be added when calculating Enterprise Value, but when you get to more advanced items, treatment varies greatly between different banks and different groups.

A more "complete" formula might be: Enterprise Value = Equity Value – Cash + Debt + Preferred Stock + Noncontrolling Interests – NOLs – Investments – Equity Investments + Capital Leases + Unfunded Pension Obligations and Other Liabilities.

In interviews you can usually get away with stating, "Enterprise Value = Equity Value – Cash + Debt + Preferred Stock + Noncontrolling Interests."

You should stick with that simplified formula unless you feel **very confident** in your knowledge, or unless they ask you for the more advanced items.

2. Wait a second, why might you add back Unfunded Pension Obligations but not something like Accounts Payable? Don't they both need to be repaid?

The distinctions are **magnitude** and **source of funds**. Accounts Payable, 99% of the time, is paid back via the company's cash flow from its normal business operations. And it tends to be relatively small.

Items like Unfunded Pension Obligations, by contrast, usually require additional funding (e.g. the company raises Debt) to be repaid. These types of Liabilities

also tend to be much bigger than Working Capital / Operational Asset and Liability items.

3. Are there any exceptions to the rules about subtracting Equity Interests and adding Noncontrolling Interests when calculating Enterprise Value?

You pretty much always add Noncontrolling Interests because the financial statements are **always** consolidated when you own over 50% of another company.

But with Equity Interests, you **only** subtract them if the metric you're looking at does **not** include Net Income from Equity Interests (which only appears toward the bottom of the Income Statement).

For example, Revenue, EBIT, and EBITDA all *exclude* revenue and profit from Equity Interests, so you subtract Equity Interests.

But with Levered Free Cash Flow (Free Cash Flow to Equity), typically you're starting with Net Income Attributable to Parent… which already **includes** Net Income from Equity Interests.

Normally you **subtract** that out in the CFO section of the Cash Flow Statement so you would *still* subtract Equity Interests if you calculate Free Cash Flow by going through all the items in that section.

But if you have *not* subtracted out Net Income from Equity Interests (if you've used some other formula to calculate FCF), you should *not* subtract it in the Enterprise Value calculation – you **want** to show its impact in that case.

This is a very subtle point, but you were warned: these are Advanced questions. Most bankers would probably not understand the explanation above.

4. Should you use the Book Value or Market Value of each item when calculating Enterprise Value?

Technically, you should use market value for everything. In practice, however, you usually use market value only for the Equity Value portion because it's difficult to determine market values for the rest of the items in the formula – so you take the numbers from the company's Balance Sheet.

5. What percentage dilution in Equity Value is "too high?"

There's no strict "rule" here, but most bankers would say that anything over 10% is odd. If the basic Equity Value is $100 million and the diluted Equity Value is $115 million, you might want to check your calculations – it's not necessarily wrong, but over 10% dilution is unusual for most companies. And something like 50% dilution would be highly unusual.

6. How do you factor in Convertible Preferred Stock in the Enterprise Value calculation?

The same way you factor in normal Convertible Bonds: if it's in-the-money, you assume that new shares get created, and if it's not in the money, you count it as Debt.

7. How do you factor in Restricted Stock Units (RSUs) and Performance Shares when calculating Diluted Equity Value?

RSUs should be added to the common share count, because they **are** just common shares. The only difference is that the employees who own them have to hold onto them for a number of years before selling them.

Performance Shares are similar to Convertible Bonds, but if they're *not* in-the-money (the share price is below the performance share price target), you do *not* count them as Debt – you just ignore them altogether. If they *are* in-the-money, you assume that they are normal common shares and add them to the share count.

8. What's the distinction between Options Exercisable vs. Options Outstanding? Which one(s) should you use when calculating share dilution?

- **Options Exercisable vs. Options Outstanding:** Normally companies put in place restrictions on **when** employees can actually exercise options – so even if there are 1 million options outstanding right now, only 500,000 may actually be **exercisable** *even if* they're all in-the-money.

There's no "correct" answer for which one to use here. Some people argue that you should use Options Outstanding because typically, all non-exercisable Options *become* exercisable in an acquisition, so that's the more accurate way to view it.

Others argue that Options Exercisable is better because you don't know whether or not the non-exercisable ones *will* become exercisable until the acquisition happens.

However you treat it, you need to be consistent with all the companies you analyze.

Calculation Questions

1. Let's say a company has 100 shares outstanding, at a share price of $10.00 each. It also has 10 options outstanding at an exercise price of $5.00 each – what is its Diluted Equity Value?

Its basic equity value is $1,000 (100 * $10 = $1,000). To calculate the dilutive effect of the options, first you note that the options are all "in-the-money" – their exercise price is less than the current share price.

When these options are exercised, 10 new shares get created – so the share count is now 110 rather than 100.

However, that doesn't tell the whole story. In order to exercise the options, we had to "pay" the company $5 for each option (the exercise price).

As a result, it now has $50 in additional cash, which it uses to buy back 5 of the new shares we created.

So the fully diluted share count is 105 and the Diluted Equity Value is $1,050.

2. Let's say a company has 100 shares outstanding, at a share price of $10 each. It also has 10 options outstanding at an exercise price of $15 each – what is its Diluted Equity Value?

$1,000. In this case the options' exercise price is above the current share price, so they have no dilutive effect.

3. A company has 1 million shares outstanding at a value of $100 per share. It also has $10 million of convertible bonds, with par value of $1,000 and a conversion price of $50. How do I calculate diluted shares outstanding?

This gets confusing because of the different units involved. First, note that these convertible bonds are **in-the-money** because the company's share price is $100, but the conversion price is $50. So we count them as additional shares rather than debt.

Next, we need to divide the value of the convertible bonds – $10 million – by the par value – $1,000 – to figure out how many individual bonds there are:

$10 million / $1,000 = 10,000 convertible bonds.

Next, we need to figure out how many shares this number represents. The number of shares per bond is the par value divided by the conversion price:

$1,000 / $50 = 20 shares per bond.

So we have 200,000 new shares (20 * 10,000) created by the convertibles, giving us 1.2 million diluted shares outstanding.

We do not use the Treasury Stock Method with convertibles because we do not pay the company anything to "convert" the convertibles – it just becomes an option automatically once the share price exceeds the conversion price.

4. Let's say that a company has 10,000 shares outstanding and a current share price of $20.00. It also has 100 options outstanding at an exercise price of $10.00.

It *also* has 50 Restricted Stock Units (RSUs) outstanding.

Finally, it also has 100 convertible bonds outstanding, at a conversion price of $10.00 and par value of $100.

What is its Diluted Equity Value?

First, let's tackle the options outstanding: since they are **in-the-money** (exercise price is lower than the share price), we assume that they get exercised and that 100 new shares get created.

The company receives 100 * $10.00, or $1,000, in proceeds. Its share price is $20.00 so it can repurchase 50 shares with these proceeds. Overall, there are 50 additional shares outstanding now (100 new shares – 50 repurchased).

The 50 RSUs get added as if they were common shares, so now there's a total of 100 additional shares outstanding.

For the convertible bonds, the conversion price of $10.00 is below the company's current share price of $20.00, so conversion is allowed.

We divide the par value by the conversion price to see how many new shares per bond get created:

$100 / $10.00 = 10 new shares per bond

Since there are 100 convertible bonds outstanding, we therefore get 1,000 new shares (100 convertible bonds * 10 new shares per bond).

In total, there are 1,100 additional shares outstanding. The diluted share count is therefore 11,100.

The Diluted Equity Value is 11,100 * $20.00, or $222,000.

5. This same company also has Cash of $10,000, Debt of $30,000, and Noncontrolling Interests of $15,000. What is its Enterprise Value?

You subtract the Cash, add the Debt, and then add Noncontrolling Interests:

Enterprise Value = $222,000 – $10,000 + $30,000 + $15,000 = $257,000.