Access the Rest of the Fundamentals Course

Financial Modeling Fundamentals Module 6: Equity Value, Enterprise Value, and Valuation Metrics and Multiples – Core Concepts

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Overview & Key Rules of Thumb

Questions on **Equity Value**, **Enterprise Value**, and **valuation metrics and multiples** are some of the most common ones in interviews.

Unfortunately, most guides, textbooks, and websites do a *very* poor job of explaining these topics.

With accounting, other sources may not give much detail, but at least the information is correct. **But with Equity Value and Enterprise Value, the information is outright WRONG**.

For example, if someone asked you what "Enterprise Value" meant, what would you say?

From the Google search results, a reasonable answer might be: "Market Capitalization, plus Debt, Noncontrolling interests, and Preferred Stock."

Other sources give explanations like: "Enterprise Value represents the 'theoretical takeover price' of a company."

All these definitions are wrong or misleading.

The **REAL** definition of Enterprise Value is: **"The value of a company's core business operations to ALL the investors in the company."**

In the sections below, we'll delve into this definition, show you how to use these concepts in real life, explain how to pair Equity Value and Enterprise Value with operating metrics to create **valuation multiples**, and explain how everything changes after specific events.

Key Rule #1: The REAL Definitions of Equity Value and Enterprise Value

These concepts go back to that all-important formula:

Company Value = Cash Flow / (Discount Rate – Cash Flow Growth Rate)

The accounting lessons dealt with the **cash flow** part of that formula.

Equity Value and **Enterprise Value** deal with the **Company Value** part.

Specifically, how do you *measure* "Company Value"?

That is tricky to answer because companies are worth different amounts to different types of investors.

It's also tricky to answer because "the market" may say a company is worth one amount, but its *intrinsic* value may be something different.

Based on these observations, there are **4 ways you can measure a company's value**:

- **The Company's "Market Value"** – What *is* the company worth right now according to the stock market, its current owners, or its current investors?

- **The Company's Implied or "Intrinsic" Value** – What *should* the company be worth according to your analysis and views?

Why might the Market Value be different from the Implied Value?

Let's say you're analyzing a company that has $100 in cash flow.

Both you and the company's current owners believe the appropriate Discount Rate is **10%** because similar companies are expected to generate annual returns of 10% in the long term.

However, you disagree about the expected growth rates. You believe the company's cash flow will grow at 4% in the future, but the current owners think it will grow at 5%.

As a result, the company's value is very different to both groups:

Implied Value to YOU = $100 / (10% – 4%) = $1,666.

Market Value = $100 / (10% – 5%) = $2,000.

So the owners want $2,000 for the company, or they won't sell it.

But you believe that the company is too expensive and that its intrinsic value is quite a bit lower. As a result, you won't buy the company at that price.

That's the main reason why a company's Market Value may be different from its Implied Value: **you believe the company's future growth will be one number, but "the market," or other investors, believe something else**.

You might also disagree about the Discount Rate or even the company's Cash Flow. But *most* valuation differences boil down to disagreements about future growth.

Now that we've explained how Implied Value and Market Value differ, we need to define "Company Value" more precisely.

The two main ways to measure "Value" are **Equity Value** and **Enterprise Value**:

- **Equity Value:** The value of **EVERYTHING** a company has (i.e., **ALL** its Assets), but only to **EQUITY INVESTORS** (i.e., common shareholders).

- **Enterprise Value:** The value of the company's **CORE BUSINESS OPERATIONS** (i.e., **ONLY** the Assets related to its core business), but to **ALL INVESTORS** (Equity, Debt, Preferred, and possibly others).

If the company is publicly traded – you can buy its shares on the stock market – then its **Current Equity Value** is its **Market Capitalization**: Its shares outstanding times its current share price.

To move from a company's Equity Value to its Enterprise Value, go back to the **definitions**:

- **Equity Value** = Value of Core-Business Assets + Value of Non-Core-Business Assets
- **Enterprise Value** = Value of Core-Business Assets

- **Equity Value** = Value to Equity Investors
- **Enterprise Value** = Value to Equity Investors + Value to Debt Investors + Value to Preferred Investors (and possibly others)

So you **subtract non-core-business Assets** and **add Liability & Equity items that represent other investor groups** to make this move. Here's a simple example:

Assumptions & Model Output

Tax Rate:	40%	**Current Equity Value:**	**$ 10,000**
		(+) Debt:	550
Share Price:	$ 10.00	(+) Preferred Stock:	200
Shares Outstanding:	1,000	(+) Noncontrolling Interests:	-
Initial Cash Balance:	$ 100	(-) Cash & Investments:	(300)
		Current Enterprise Value:	**$ 10,450**

We'll get into "Noncontrolling Interests" later on… don't worry about it for now.

We're using the company's **current share price** and **shares outstanding** to calculate its Equity Value ($10.00 * 1,000 = $10,000), so this counts as its **Current Equity Value**.

The Current Equity Value is what *everyone else* in the market – not us! – thinks **ALL** the company's Assets are worth.

Then, to calculate the company's Current Enterprise Value, we add its Debt, Preferred Stock, and Noncontrolling Interests, and we subtract its Cash and Investments.

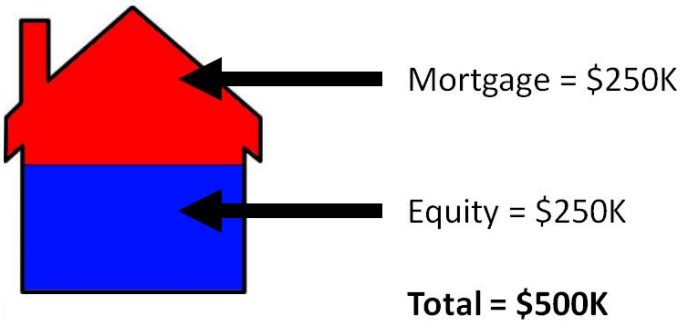
The company's Cash and Investments count as "non-core-business Assets" **because the company doesn't need them to sell products to customers**.

The company does need a small amount of cash to continue operating, but as a simplification, you ignore that in the calculation.

You add the Debt, Preferred Stock, and Noncontrolling Interests **because they represent other investor groups**.

You calculate Equity Value and Enterprise Value **only at a specific point in time**; there's no such thing as a "projected" Enterprise Value, for example.

To understand Equity Value and Enterprise Value with a real-life analogy, pretend you're buying a $500K house with a $250K mortgage and $250K of your own money ("Equity"):



This $500K corresponds to **only the "core" parts of the house:** The foundation, the rooms, the walls, and the land.

When you go out to inspect the yard, you discover that the current owner has left **garden tools** and **cleaning supplies** out there.

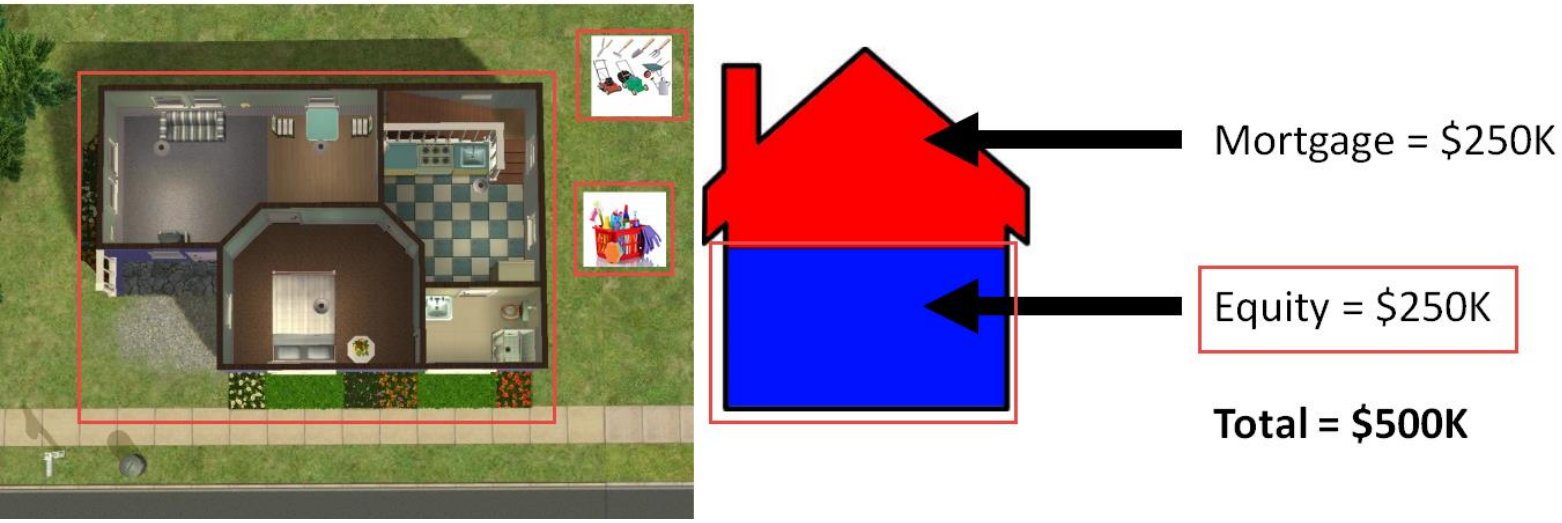
You don't care about these items because they're not a **core part of the house**.

You plan to sell them as soon as you buy the house because you don't need them.

But they come with the house, and the owner, therefore, has to charge you for them.

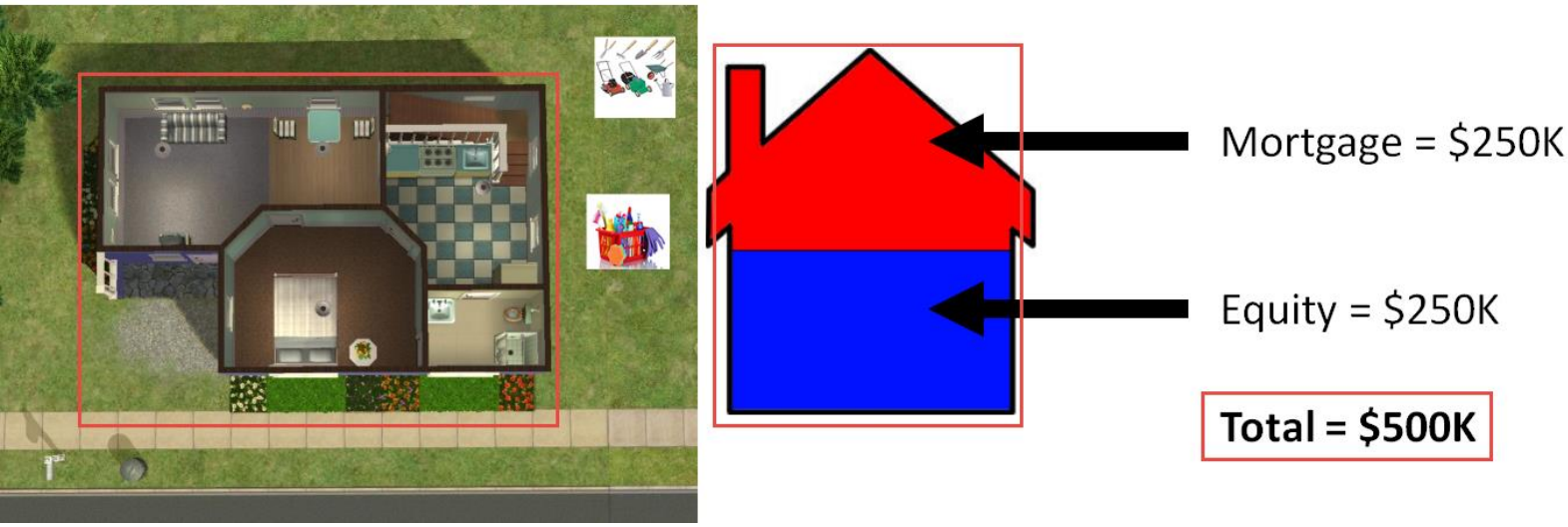
In this context, here's what **Equity Value** and **Enterprise Value** represent:

Equity Value represents **EVERYTHING** that comes with this house - the property, foundation, walls, rooms, etc., plus those random gardening tools and cleaning supplies... but **ONLY TO YOU** and the down payment you just made.



You've made the $250K down payment, and now you get *everything* that comes with the house, even the completely random items. That's **Equity Value**.

Whereas **Enterprise Value** represents **ONLY** the core parts of the house - the land, foundation, walls, rooms, etc. - but to **BOTH** you, the equity investor, and to the mortgage lenders that helped you buy the house.



So Enterprise Value **includes new items** – the mortgage – but also **leaves out** other items, like those gardening tools and cleaning supplies.

Moving back to companies, here's the **Equity Value** view of Coach (the luxury fashion company):

COACH, INC.
CONSOLIDATED BALANCE SHEETS
ASSETS

Current Assets:		
Cash and cash equivalents	$	1,291.8
Short-term investments		234.0
Trade accounts receivable, less allowances of $3.1 and $1.4, respectively		219.5
Inventories		485.1
Deferred income taxes		98.4
Prepaid expenses		73.1
Other current assets		104.6
Total current assets		2,506.5
Property and equipment, net		732.6
Long-term investments		406.0
Goodwill		434.2
Intangible assets		359.9
Deferred income taxes		115.8
Other assets		111.9
Total assets	$	4,666.9
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$	222.8
Accrued liabilities		600.6
Current debt		11.3
Total current liabilities		834.7
Long-term debt		879.1
Other liabilities		463.2
Total liabilities		2,177.0
Stockholders' Equity:		
Preferred stock: (authorized 25.0 million shares; $0.01 par value) none issued		—
Common stock: (authorized 1,000.0 million shares; $0.01 par value) issued and outstanding – 276.6 million and 274.4 million shares, respectively		2.8
Additional paid-in-capital		2,754.4
Accumulated deficit		(189.6)
Accumulated other comprehensive loss		(77.7)
Total stockholders' equity		2,489.9
Total liabilities and stockholders' equity	$	4,666.9

These items represent the Equity Value of Coach because we're including **ALL** its Assets but **ONLY** its Common Equity on the L&E side of the Balance Sheet.

In real life, you would use the **MARKET VALUE** of the company's Equity or its **IMPLIED VALUE** according to your views of the company.

To move from Equity Value to Enterprise Value, you subtract the non-core-business Assets: Cash, Short-Term Investments, and Long-Term Investments.

And on the other side of the Balance Sheet, you add Debt and Preferred Stock since they represent other investor groups.

Here's what it looks like:

COACH, INC.
CONSOLIDATED BALANCE SHEETS
ASSETS

Current Assets:		
Cash and cash equivalents	$	1,291.8
Short-term investments		234.0
Trade accounts receivable, less allowances of $3.1 and $1.4, respectively		219.5
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Accumulated deficit		(189.6)
Accumulated other comprehensive loss		(77.7)
Total stockholders' equity		2,489.9
Total liabilities and stockholders' equity	$	4,666.9

These items represent the Enterprise Value of Coach because we're including **ONLY** its core-business Assets, but **ALL** the investor groups on the L&E side of the Balance Sheet.

In real life, you would use the **MARKET VALUES** of all these items or their **IMPLIED VALUES** according to your views of the company.

Which one is correct?

Both of them.

There is no "correct" way to view a company's value; there are just *different* ways of viewing it.

When you analyze companies, you'll move back and forth between Equity Value and Enterprise Value all the time.

You need to understand and use both because one analysis might give you Equity Value, but another analysis might produce Enterprise Value.

Let's tie together all these concepts with a simple example.

Suppose that you want to continue with the diagrams above and assess **Coach**.

To calculate its Current Equity Value and Current Enterprise Value, you start by taking its shares outstanding and multiplying by its share price.

If it has 1 billion shares outstanding, and its current share price is $10.00, its **Current Equity Value is $10 billion**.

Then, you subtract its Cash, Investments, and non-core-business Assets, which are worth $1.3 billion + $234 million + $406 million = ~$1.9 billion total.

Then, you add its Debt and Preferred Stock, which are worth $11.3 million + $879.1 million + $0 = $890.4 million.

So its **Current Enterprise Value is ~$9 billion**.

What do these numbers mean? On their own, not much.

You now have to **value the company according to your views of it** – in other words, you must calculate its *Implied* Enterprise Value and *Implied* Equity Value.

So you project the company's cash flows, and then you discount them back to their Present Value, using a variation of this formula:

Company Value = Cash Flow / (Discount Rate – Cash Flow Growth Rate)

Based on *your views* – the Growth Rate and Discount Rate you've used – the company's **Implied Enterprise Value is $10.5 billion**.

Then, you back into the company's Implied Equity Value by *adding* Cash, Investments, and non-core-business Assets and *subtracting* Debt and Preferred stock, so its Implied Equity Value = $10.5 billion + $1.9 billion – $890 million = **$11.5 billion**.

The company's Implied Share Price is then $11.5 billion / 1 billion shares, or $11.50 per share.

So your conclusion might be that the company's shares SHOULD be worth $11.50 each and that it's a good deal to buy them at $10.00 per share.

You came to those conclusions because you developed **your view** of the company and calculated its Implied Equity Value and Implied Enterprise Value, which were higher than its Current Equity Value and Current Enterprise Value.

What About Private Companies?

These examples have all used public companies with share prices and public filings.

If you're working with **private companies** – ones not listed on the stock market – not *that much* changes.

The concepts of Equity Value and Enterprise Value still apply, as does the distinction between Current Value and Implied Value.

The main difference is that you can't calculate Current Equity Value by using the company's share price and shares outstanding because its shares are not publicly traded.

So you have to rely on the valuation at which the company most recently raised money, the price at which it was most recently acquired, or some other external estimate to estimate its Current Equity Value.

As a result, you also can't calculate its Current Enterprise Value in a straightforward way.

In practice, you often *skip* Current Equity Value and Current Enterprise Value for private companies altogether and just use your views to estimate the Implied Equity Value and Implied Enterprise Value.

So if you're an investment banker advising a **public** company, you might make a comparison between the company's current share price and its *implied* share price – what you think it *should* be worth.

But if you're advising a **private** company, you would skip the comparison and simply tell the client what you think it *should* be worth.

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Key Rule #2: Implications of Equity Value and Enterprise Value

Consider the most famous equation in physics:

$E = mc^2$

E = energy, m = mass, and c = the speed of light in a vacuum (~300 million meters/second).

It's part of Einstein's theory of special relativity, and it says that **mass and energy are equivalent**.

It's a simple equation, but its **implications** are far-reaching: For one, it implies that even very small amounts of matter have enormous amounts of energy.

It also implies that you can **convert** matter into energy, which explains nuclear reactors and atomic bombs.

In the same way, **the definitions of Equity Value and Enterprise Value** have far-reaching implications.

We'll explore those implications in this section and then **bust some common myths** about these concepts.

Implication #1: Current Equity Value Cannot Be Negative, But Current Enterprise Value Can Be Negative

There are two ways to think about this one:

- **Way #1:** A company's **share price** cannot be negative, and its **share count** also cannot be negative. Its share price can be either $0.00 or positive, and its share count must be positive. So it's mathematically impossible for Current Equity Value to be negative.

- **Way #2:** A company's **Total Assets** cannot have a negative value. They might be *worthless* – i.e., worth exactly $0 – but Assets like Cash or Inventory could never be worth *less* than $0.

This same concept applies even to private companies: Could a tech or biotech startup raise money from venture capitalists at a *negative* valuation? No! It must be positive.

On the other hand, Current Enterprise Value could easily be negative. For example, what if the company's Current Equity Value is $100 million, but it has $200 million in Cash and no Debt?

Its Current Enterprise Value is **negative $100 million**.

This scenario is rare; it's most common for pre-bankruptcy companies that are burning through cash at high rates, and that may not be able to satisfy all their claims.

A Negative Enterprise Value lets you **buy cash at a discount**… assuming the company survives!

Implication #2: Both the IMPLIED Equity Value and IMPLIED Enterprise Value Can Be Negative

As a simple example, if a company's Cash Flow is currently negative $100, and it's expected to stay that way, and the Discount Rate is 3% and the Growth Rate is 2%:

Company Value = ($100) / (3% – 2%) = ($10,000)

Assuming that this is the **cash flow to ALL investors** and that the Discount Rate is WACC, then the company's Implied Enterprise Value is negative $10,000.

If the company has $500 in Cash and no Debt, then its Implied Equity Value will also be negative.

You back into Implied Equity Value rather than calculating it with Shares Outstanding * Current Share Price, so there's no reason why it *can't* be negative.

Note that while this scenario is THEORETICALLY possible, it's extremely unlikely in real life unless you're analyzing distressed or highly speculative companies.

Implication #3: IN THEORY, Financing Events Will Not Affect Enterprise Value, But They May Affect Equity Value

If a company with an Equity Value of $1,000 and Enterprise Value of $1,200 issues $100 of Stock, what happens to both metrics?

You know from the Accounting lessons that issuing $100 of Stock results in $100 of additional Cash on the Assets side of the Balance Sheet and $100 in additional Common Stock & APIC on the L&E side.

So the company now has $100 in extra Assets, and those extra Assets were *funded* by Equity investors. **As a result, Equity Value increases by $100**.

To move from Equity Value to Enterprise Value, you subtract non-core-business Assets, and you add items that represent other investor groups.

Equity Value is $100 higher, but you subtract the extra $100 of Cash. There are no new, other investor groups to add.

So the changes cancel each other out, and **Enterprise Value stays the same**.

That is extremely important.

According to the finance theory behind it (the Modigliani–Miller theorem), **Enterprise Value will NOT be affected by these financing events**.

This theory doesn't hold up in real life because taxes, the risk of bankruptcy, agency costs, and inefficient markets all mean that financing changes *will* affect Enterprise Value.

But for purposes of interview questions about these changes, the same thing always happens: Cash changes, but then something on the L&E side of the Balance Sheet offsets the change so that Enterprise Value doesn't change.

Here are a few examples:

- **Raising Debt:** Won't impact Enterprise Value; Cash and Debt both increase and offset each other.
- **Repaying Debt:** Won't impact Enterprise Value; Cash and Debt both decrease and offset each other.
- **Raising Equity:** Won't impact Enterprise Value; Cash and Equity Value both increase and offset each other.
- **Repurchasing Shares:** Won't impact Enterprise Value; Cash and Equity Value both decrease and offset each other.
- **Issuing Dividends:** Won't impact Enterprise Value; Cash and Equity Value both decrease and offset each other.

Note that Equity Value **MAY BE AFFECTED**, but will not *necessarily* be affected by these events.

Please see the accompanying Excel file on how these financing events affect Equity Value and Enterprise Value for examples with real numbers.

Implication #4: IN THEORY, Only Changes to a Company's Core Business Will Affect Enterprise Value

"OK," you say, "That makes sense, but then what **DOES** affect Enterprise Value, either Current or Implied?"

You can answer this question by going back to the **definition:**

- **Enterprise Value:** The value of the company's **CORE BUSINESS OPERATIONS** (i.e., **ONLY** the Assets related to its core business), but to **ALL INVESTORS** (Equity, Debt, Preferred, and possibly others).

Enterprise Value changes only if the value of a company's core business operations (the Assets related to its core business) changes.

Here are a few examples of what could cause Enterprise Value, either Current or Implied, to change:

- **Example 1:** The company wins a major contract with a new customer, boosting its expected future Revenue.
- **Example 2:** The company's expansion strategy into Southeast Asia succeeds more quickly than expected, boosting its expected future Revenue.
- **Example 3:** The company closes down an unprofitable division, boosting its margins and its expected future cash flow.

- **Example 4:** The company negotiates a better supplier contract, boosting its margins and its expected future cash flow.

These changes all **improve the company's expected future cash flow**.

And these changes do **NOT** boost the cash flow just for one group of investors. **ALL the investors** – Debt, Equity, and Preferred – benefit.

So this is the **real** distinction between Equity Value and Enterprise Value:

Only changes to a company's underlying business affect its Enterprise Value, but *both* financial and operational changes affect its Equity Value.

But you can't just "ignore" Equity Value; you'll always look at both metrics when analyzing companies.

Finally, remember that this principle is true *in theory*. In real life, financial changes will affect Enterprise Value, but by far less than they affect Equity Value.

Implication #5: Metrics That Represent ONLY Equity Investors Pair with Equity Value, and Metrics That Represent ALL Investors Pair with Enterprise Value

We've already looked at metrics like **Return on Equity (ROE)** and **Return on Invested Capital (ROIC)**, but we didn't explain the calculations behind them.

For example, why do you use Net Income with Equity to calculate ROE, and also with Assets to calculate ROA?

You should know part of the answer now: A company's **Total Assets** match up with that company's **Equity** and **Equity Value**.

That's from the definition of Equity Value: It represents the value of **ALL** the company's Assets but **ONLY** to Equity investors.

But why Net Income?

Think about it in terms of "who gets paid" at each step along a company's Income Statement.

Initially, a company's Revenue, Gross Profit, and Operating Income are available to **all investors in the company**.

When any of those increases, everyone benefits. For example, higher sales make it easier for the company to pay interest on Debt, to pay Preferred Dividends, and to pay Common Dividends to the shareholders.

But as you **move down the Income Statement**, **you start eliminating different investor groups** as they receive payment, and you start reflecting income and expenses from non-core-business Assets:

COACH, INC.
CONSOLIDATED STATEMENTS OF INCOME

Net sales	$	4,191.6
Cost of sales		1,283.0
Gross profit		2,908.6
Selling, general and administrative expenses		2,290.6
Operating income		618.0
Interest (expense) income, net		(6.4)
Other expense		—
Income before provision for income taxes		611.6
Provision for income taxes		209.2
Net income	$	402.4
Net income per share:		
Basic	$	1.46
Diluted	$	1.45
Shares used in computing net income per share:		
Basic		275.7
Diluted		277.2
Cash dividends declared per common share	$	1.350

Everything up here is available to **ALL** investors and benefits everyone, so these items all pair with Enterprise Value.

The **Debt** investors "get paid" here with this Interest. After they receive this Interest, nothing else on the Income Statement is available for them.

Other Income / (Expense) is based on the **non-core-business Assets** a company has. So once we factor this in, it means that *anything* below it has to correspond to All Assets and Equity Value.

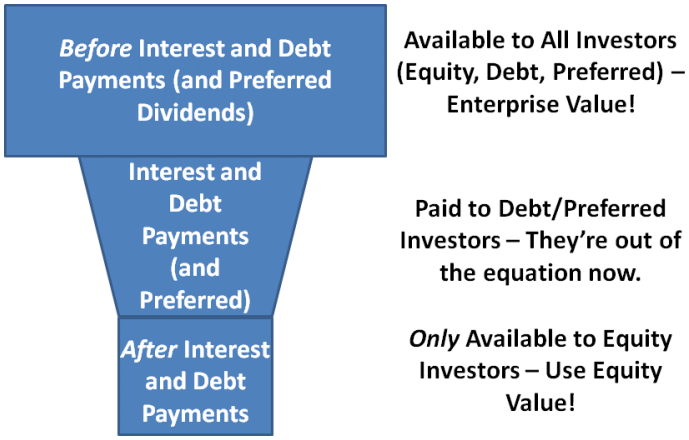
And this is **why** Net Income corresponds to Equity Value: Debt and Preferred Investors have been paid by this point, so they're out of the picture. But we've also included income and expenses from non-core-business Assets right above!

If the company had Preferred Stock here, there would be an entry for Preferred Stock Dividends right below Net Income.

Then, the company would subtract the Preferred Dividends from Net Income to calculate **Net Income to Common** at the bottom.

And you'd have to use this **Net Income to Common** figure for all the metrics and multiples you calculate based on Net Income.

You can think of this concept using the funnel structure on the right:



If a metric does *not* yet reflect Interest Expense and Preferred Dividends, i.e. neither one has been *subtracted* yet, then you pair it with **Enterprise Value**.

If a metric **does** reflect Interest Expense and Preferred Dividends, i.e. they have both been *subtracted*, then you pair it with **Equity Value**.

After both of those have been subtracted, the remaining cash flow is available **only** to the Equity Investors, which is why any metric like this pairs with Equity Value.

The most common metrics that pair with **Enterprise Value** include:

- Revenue
- Operating Income or EBIT
- Net Operating Profit After Taxes (NOPAT), defined as EBIT * (1 – Tax Rate)
- EBITDA
- Unlevered Free Cash Flow (UFCF) or Free Cash Flow to Firm (FCFF) – Cash flow that's available to **ALL** investors

The most common metrics that pair with **Equity Value** include:

- Net Income (or Net Income to Common if there are Preferred Dividends)
- Free Cash Flow (CFO – CapEx)
- Levered Free Cash Flow (CFO – CapEx – Mandatory Debt Repayments)

Myths About Equity Value and Enterprise Value

Before moving on, let's destroy some common myths about Equity Value and Enterprise Value that you'll see on Investopedia, Wikipedia, online forums, and other so-called "sources."

MYTH #1: Enterprise Value is the "Cost to Acquire a Company"

NO! As stated above, **Enterprise Value** is the value of a company's core business operations to *all* the investors in the company.

When a company wants to acquire 100% of another company, *at the minimum*, it must pay for all the other company's shares outstanding.

So the minimum purchase price is the other company's Equity Value.

Past that, it gets tricky because not all acquisitions treat Debt and Cash in the same way.

In most cases, the seller must "refinance" Debt (i.e., replace it with new Debt, or pay it off entirely) if there's a "change of control" and someone else ends up owning the company.

However, this same condition isn't necessarily true of the other Debt-like items that you add when moving from Equity Value to Enterprise Value.

Also, the acquirer doesn't necessarily "get" all the seller's Cash for itself because the seller still needs a certain minimum amount for operational purposes.

Finally, the acquirer may have to pay additional fees associated with the deal that are not reflected in the seller's Enterprise Value at all.

MYTH #2: Enterprise Value is the "True Value" of a Company

This statement might seem true at first, but it's missing one critical component: **To whom?**

Enterprise Value might be considered the "true value" of a company **to all the investors combined**, but if you're a common shareholder, it's certainly *not* the true value to you.

Going back to the home-buying analogy with the $250K mortgage and $250K down payment, how much is that new house worth to you?

You might be tempted to say, "$500K," but think about what would happen if you went to sell the house right after you bought it.

You'd only get $250K for it because you'd have to repay the $250K mortgage. So even if the home sells for $500K total, *you* only get $250K out of it.

MYTH #3: Debt "Adds" to Enterprise Value, and Cash "Subtracts" from Enterprise Value

No, no, no, and triple no.

Debt doesn't "add to" a company's Enterprise Value. *You add Debt* when you move from a company's Equity Value – Current or Implied – to its Enterprise Value – Current or Implied.

Similarly, Cash doesn't "subtract from" a company's Enterprise Value.

You subtract Cash when you move from a company's Equity Value – Current or Implied – to its Enterprise Value – Current or Implied.

This may seem like a meaningless distinction, **but the difference is huge**.

If you say that Debt "adds to" Enterprise Value, you're implying that raising Debt can *change* a company's Enterprise Value – **which is not true!**

So if you get this distinction wrong, you'll incorrectly think that issuing Debt or Equity changes a company's Enterprise Value.

But they do not!

According to the definition, only **changes to a company's core business operations** affect its Enterprise Value – not financing changes.

(And again, in reality, there will still be a small impact from financing changes, but far less of an impact than there is on Equity Value.)

MYTH #4: You Subtract Cash When Calculating Enterprise Value Because It's "The Opposite" of Debt

No, no, no, and no.

You subtract Cash when moving from Equity Value to Enterprise Value because it is a non-core-business Asset.

In other words, the company doesn't *need* its cash balance to continue operating and selling products to customers.

On the other hand, it **does** need its Inventory and its PP&E to continue doing these activities – so you don't add or subtract those items.

Technically, you should subtract only the *excess* cash balance, but in practice, everyone simplifies this and subtracts the entire balance.

Finally, there's one other reason why Cash is not "the opposite" of Debt: **Many forms of Debt do not allow early repayment**.

So even if a company has a huge Cash balance, it can't necessarily use it to repay Debt.

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Key Rule #3: Valuation Multiples with Equity Value & Enterprise Value

Equity Value and Enterprise Value are useful when you create a long-term cash flow analysis for a company (i.e., a Discounted Cash Flow or DCF analysis), and you want to compare the company's *Implied* Value to its *Current* Value.

But they're **not** that useful for comparing different companies.

For example, consider these two companies:

- **Company A** – Current Equity Value of $500 million; Current Enterprise Value of $800 million.
- **Company B** – Current Equity Value of $100 million; Current Enterprise Value of $300 million.

Which company is more valuable?

You'd probably say Company A because its Current Equity Value and Current Enterprise Value are both higher.

But it's not a fair comparison because Company A could also be much bigger than Company B.

For example, what if Company A has $100 million in EBITDA and $300 million in Revenue, and Company B has $10 million in EBITDA and $30 million in Revenue?

If you take both companies' Enterprise Values and *divide them* by these metrics, you get these results:

- **Company A** – EV / EBITDA = 8.0x; EV / Revenue = 2.7x.
- **Company B** – EV / EBITDA = 30.0x; EV / Revenue = 10.0x.

So which company is more valuable now?

This concept is similar to how one house's asking price might be $2 million, and another's might be $500K.

By itself, that doesn't mean anything because **one house might be a lot bigger than the other**.

What matters are the **per-square-foot** or **per-square-meter** values.

If the $2 million house has 20,000 square feet, its asking price is $100 per square foot.

And if the $500K house has 2,500 square feet, its asking price is $200 per square foot.

Which one seems more expensive now?

Of course, even those numbers may not tell the whole story.

For example, what if the $100-per-square-foot home is in an area with gang violence, while the $200-per-square-foot home is in a safe area with no crime?

Sure, the $100-per-square-foot home is "cheaper," but would you want to live there?

It works the same way with companies: **To compare them, you need to create "multiples" that show company values on a per-unit basis**.

And just like with houses, these multiples are a *starting point* for the analysis but don't tell you the full story.

Here are a few examples of common valuation multiples:

- **EV / Revenue** – Enterprise Value / Revenue
- **EV / EBIT** – Enterprise Value / EBIT
- **EV / EBITDA** – Enterprise Value / EBITDA
- **P / E** – Equity Value / Net Income or Price per Share / Earnings per Share

Just like you can't compare the price of a home in Beverly Hills (a wealthy area of Los Angeles) to one in Compton (another part of LA with significantly more crime), you also can't compare companies of vastly different sizes in different industries.

The companies must be similar for a comparison of multiples to be meaningful.

So if you're looking at a set of mid-size European manufacturing companies with EBITDA between €100 million and €500 million, multiples like EV / EBITDA and P / E are meaningful.

But you can't compare a pre-revenue biotech startup to Pfizer – it's meaningless because the companies are so different.

The rest of this section will focus on **how to pair financial metrics together** to create multiples, and what multiples **mean**.

How Do You Pair the Financial Metrics?

We covered this concept in the "Implications" section above, but the basic idea is as follows: Think about "who gets paid" at each step down a company's Income Statement.

As you **move down the Income Statement**, you start eliminating different investor groups as they receive payment, and you start reflecting the impact of non-core-business Assets:

COACH, INC.
CONSOLIDATED STATEMENTS OF INCOME

Net sales	$	4,191.6
Cost of sales		1,283.0
Gross profit		2,908.6
Selling, general and administrative expenses		2,290.6
Operating income		618.0
Interest (expense) income, net		(6.4)
Other expense		—
Income before provision for income taxes		611.6
Provision for income taxes		209.2
Net income	$	402.4
Net income per share:		
Basic	$	1.46
Diluted	$	1.45
Shares used in computing net income per share:		
Basic		275.7
Diluted		277.2
Cash dividends declared per common share	$	1.350

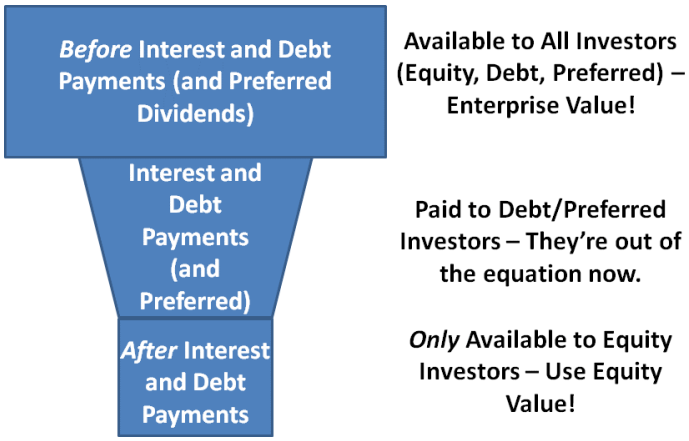
Everything up here is available to **ALL** investors and benefits everyone, so these items all pair with Enterprise Value.

The **Debt** investors "get paid" here with this Interest. After they receive this Interest, nothing else on the Income Statement is available for them.

Other Income / (Expense) is based on the **non-core-business Assets** a company has. So once we factor this in, it means that *anything* below it has to correspond to All Assets and Equity Value.

And this is **why** Net Income corresponds to Equity Value: Debt and Preferred Investors have been paid by this point, so they're out of the picture. But we've also included income and expenses from non-core-business Assets right above!

You can think of this concept using the funnel structure on the right:



If a metric does *not* yet reflect Interest Expense and Preferred Dividends, i.e. neither one has been *subtracted* yet, then you pair it with **Enterprise Value**.

If a metric **does** reflect Interest Expense and Preferred Dividends, i.e. they have both been *subtracted*, then you pair it with **Equity Value**.

After both of those have been subtracted, the remaining cash flow is available **only** to the Equity Investors, which is why any metric like this pairs with Equity Value.

But there's more to this concept: More broadly, you want to make **apples-to-apples** comparisons.

If the NUMERATOR – Equity Value or Enterprise Value – includes the value of a Balance Sheet item, you should NOT include its corresponding income or expenses in the DENOMINATOR.

And if the NUMERATOR does NOT include the value of a Balance Sheet item, you SHOULD include its corresponding income or expenses in the DENOMINATOR.

This rule explains why you **exclude** Interest Expense when you calculate a multiple such as EV / EBITDA or EV / EBIT: Enterprise Value already includes Debt, so you **exclude** the expense associated with Debt – Interest – in the denominators.

If the company has Preferred Stock, this rule also explains why it's so important to use **Net Income to Common** rather than Net Income: Equity Value does **NOT** include the Preferred Stock, so for the denominator, you should use a metric where the Preferred Dividends have been **included** (i.e., subtracted out).

This rule also works for less common metrics such as EBITDAR (EBITDA before Rental Expense, used for comparing retailers that own vs. rent their stores).

If you use EBITDAR, the numerator – Enterprise Value – **MUST** reflect the Balance Sheet value associated with the Rental Expense.

But there is nothing on the Balance Sheet associated with a simple operating lease, so you have to **capitalize** the Rental Expense (usually using a simple rule, such as 7x or 8x the annual payment) and *add it* to Enterprise Value.

The numerator becomes Enterprise Value + Capitalized Operating Leases.

When in doubt, think about **what you're excluding** and **what you're including** in the denominator to figure out what should go in the numerator.

Don't Use "Half-Pregnant" Multiples

Could you ever be **half-pregnant** in real life? No!

You're pregnant, or you're not pregnant.

In the same way, you should **avoid using multiples that correspond to something "halfway" between Equity Value and Enterprise Value**.

For example, let's say a company has Equity, Debt, Cash, and Preferred Stock.

Its Income Statement has all the standard items, including Operating Income, Net Income, and Net Income to Common.

In this scenario, you could use Equity Value and pair it with Net Income to Common.

Equity Value *does not include* Debt or Preferred Stock, and Net Income to Common *includes* Interest Expense and Preferred Dividends.

However, you should NOT use *just* Net Income and pair it with Equity Value + Debt – Cash.

Technically, this pairing satisfies the rule **because the numerator and denominator match up** – but it will be *very* confusing to anyone looking at your work.

What exactly does Equity Value + Debt – Cash (with no Preferred Stock addition) mean?

Is that "Half Enterprise Value?" "Special Enterprise Value?" "Kardashian Enterprise Value?"

Equity Value and Enterprise Value are standard numbers that everyone knows how to calculate, so you shouldn't deviate from them for the sake of "doing something different."

The *only* exception to this rule against "half-pregnant" multiples comes when you're using a metric like EBITDAR that's a slight variation on a standard metric (EBITDA).

In this case, you *do* have to use something slightly different from Enterprise Value because you capitalize the company's Rent and add it to Enterprise Value to satisfy the rule above.

HOWEVER, this new numerator is **not** "halfway" between Equity Value and Enterprise Value.

It's more like: "Enterprise Value, plus some other things."

And that's the point: **Use Equity Value or Enterprise Value, or use Enterprise Value *plus* other items, but don't use numerators that are "in between" Equity Value and Enterprise Value**.

What a Multiple Really Is: Shorthand for Valuation

In the section above, we mentioned how a "multiple" could be compared to the per-square-foot value of a house.

But there's another way to think of multiples: **shorthand for valuation**.

A valuation multiple is a short way to say, "If this company's Cash Flow is A, and it's growing at a rate of B, and the Discount Rate is C, then the company is worth $X."

Let's go back to our favorite formula:

Company Value = Cash Flow / (Discount Rate – Cash Flow Growth Rate)

And let's say a company has $100 in Cash Flow and that it's not growing at all.

In this case:

How Much is a Company Worth? - Scenario 1 - No Growth:

Discount Rate:	10.0%	
FCF Growth Rate:	0.0%	
Initial Free Cash Flow:	$ 100	
Present Value of FCFs:	**$ 1,000**	**PV** = Initial Free Cash Flow / Discount Rate
And as Calculated by Excel...	**$ 1,000**	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Free Cash Flow:	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100

Valuation Multiple:	**10.0 x**

So this **multiple of 10x** represents the fact that we'd be willing to pay 10x the company's annual Free Cash Flow to buy the company.

Since Company Value = $100 / 10% = $1,000, the Valuation Multiple = $1,000 / $100 = 10x.

Now let's say there's 3% growth each year:

How Much is a Company Worth? - Scenario 2 - Growth:

Now, let's say the company's cash flows are actually *growing* each year... could you pay MORE or LESS to get that SAME yield?

Answer: More! Because there's growth, so you can **afford** to pay MORE upfront and get that same 10% yield you're targeting.

Discount Rate:	10.0%	
FCF Growth Rate:	3.0%	
Initial Free Cash Flow:	$ 100	
Present Value of FCFs:	**$ 1,429**	**PV** = Initial Free Cash Flow / (Discount Rate - FCF Growth Rate)
And as Calculated by Excel...	**$ 1,427**	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Free Cash Flow:	$ 100	$ 103	$ 106	$ 109	$ 113	$ 116	$ 119	$ 123

Valuation Multiple:	**13.9 x**
Numerator Increases By:	42.9%
Denominator Increases By:	3.0%

In this case, Company Value = $100 / (10% – 3%) = $1,429, so the Valuation Multiple = $1,429 / $103 = **13.9x.**

We're using the Year 2 Free Cash Flow because multiples are based on *future* expectations.

The higher multiple indicates that you'd be willing to pay more for the company if its cash flows were growing more quickly.

And now let's say the company were growing even more quickly – at 5% rather than 3%:

How Much is a Company Worth? - Scenario 3 - More Growth:

Discount Rate:	10.0%
FCF Growth Rate:	5.0%
Initial Free Cash Flow:	$ 100
Present Value of FCFs:	**$ 2,000**
And as Calculated by Excel...	**$ 1,981**

PV = Initial Free Cash Flow / (Discount Rate - FCF Growth Rate)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Free Cash Flow:	$ 100	$ 105	$ 110	$ 116	$ 122	$ 128	$ 134	$ 141

Valuation Multiple:	**19.0 x**
Numerator Increases By:	40.0%
Denominator Increases By:	1.9%

The multiple increases once again!

Since the Company Value = $100 / (10% – 5%) = $2,000, the Valuation Multiple = $2,000 / $105 = **19x**.

Like many of these concepts, this one does not *exactly* hold up in real life.

One problem is that valuation multiples are usually based on Income Statement metrics like Revenue, EBIT, EBITDA, and Net Income, whereas a company's value depends on its *Cash Flow* and *Cash Flow Growth Rate*.

So when there are big discrepancies between cash flow and metrics such as EBIT and EBITDA, you'll get behavior that doesn't match this concept.

Another problem is that this rule assumes the Discount Rate stays the same.

But the Discount Rate is quite subjective. *Even if* you've picked companies of similar sizes in the same industry, the Discount Rate may not be the same, or even similar, for all of them.

For example, maybe you've picked U.S.-based retailers with revenue between $200 and $500 million for your set of comparable companies.

That seems reasonable, but are they *all* truly comparable? What if one company is spending half as much on CapEx, but growing at the same rate as the others?

Or what if one retailer specializes in a geography or sub-industry that is declining?

In those cases, the individual companies' Discount Rates might differ substantially.

Finally, non-financial factors also influence valuation multiples.

For example, what if a company just reported earnings far below expectations because of a recent lawsuit?

The company's stock price would likely plummet, reducing its valuation multiples, *even though nothing about its expected performance has changed*.

Or what if one company just recruited a top executive from a competitor, or announced plans to develop a new product that might take the market by storm?

Those factors are difficult to quantify in a company's cash flow or cash flow growth rate, but they could all affect its multiples.

The general rule is: **If two companies are very similar, but one company is trading at higher multiples, the company with higher multiples has a higher expected cash flow growth rate**.

However, there are many exceptions and special cases where that rule doesn't hold up – and that's why it is a "rule of thumb" rather than a law of nature.

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Key Rule #4: Why "Enterprise Value" is a Pink Unicorn

Ready to take the **red pill**?

In a previous section, we explained why Enterprise Value is not affected by changes in financing, but why Equity Value is affected by both operational and financial changes.

But that's not quite true.

It *is* true that Enterprise Value will be **LESS** impacted by financing events than Equity Value, but in real life, there will still be **SOME** impact from financing changes.

The reasoning goes back to that all-important formula:

Company Value = Cash Flow / (Discount Rate – Cash Flow Growth Rate)

Let's say that "Cash Flow" is "Unlevered Free Cash Flow," or Free Cash Flow to Firm, meaning that it's available to **ALL** the investors in the company.

As a result, you use WACC, or the Weighted Average Cost of Capital, for the Discount Rate, and Company Value will be the company's Implied Enterprise Value:

Implied Enterprise Value = Unlevered FCF / (WACC – Unlevered FCF Growth Rate)

A company has Unlevered FCF of $100, and it's growing by 3% per year. WACC is 10.0%.

If the company now raises additional Debt or Equity, repays Debt, or repurchases shares, its WACC will change.

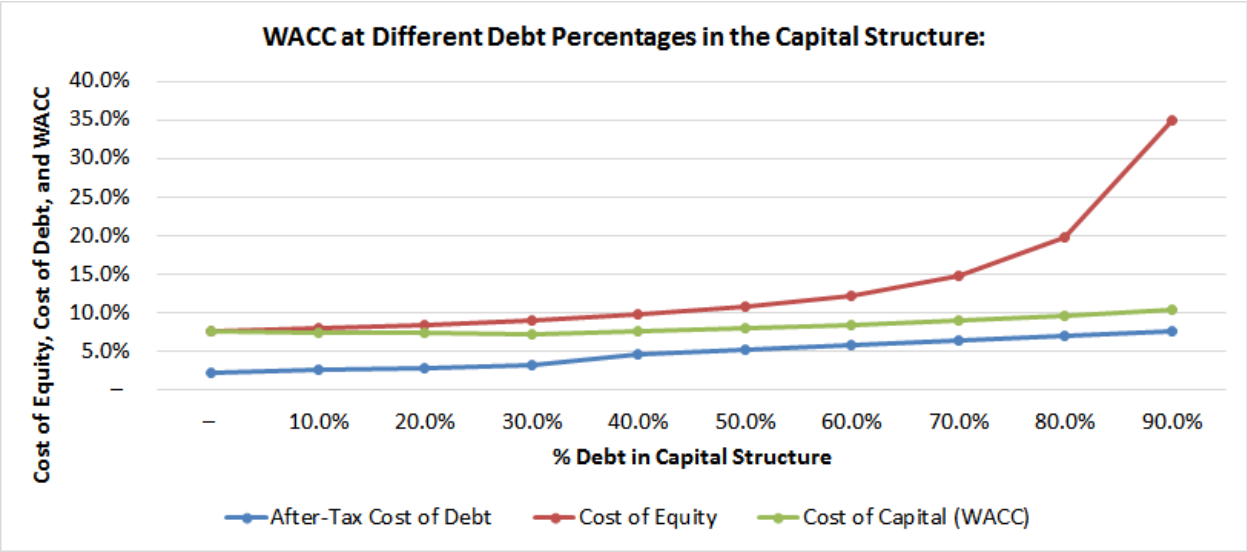
Remember that WACC is equal to the "cost" of each part of a company's capital structure times the percentage of capital in that part:

WACC = Cost of Equity * % Equity + Cost of Debt * % Debt + Cost of Preferred * % Preferred

So if a company has different amounts of Debt, Equity, or Preferred Stock, those percentages will all change – and therefore WACC will change.

But there's more to it than that. **At different levels of Debt and Equity, the *Costs* of Debt and Equity also start to change!** (We'll ignore Preferred Stock in the next part for simplicity)

Here's a graph of how WACC might change at different levels of Debt and Equity:



These percentages are just **guesstimates** – they're not "based on" any particular formula, but on what happens in real life as companies take on more Debt.

Debt investors have lower returns expectations than Equity investors since they can only earn a fixed, or relatively fixed, interest rate on the Debt; also, to the company, the Interest Expense is tax-deductible.

For these reasons, we can say that Debt is "cheaper" than Equity.

Since Debt is cheaper than Equity, more Debt will reduce WACC… up to a certain point.

But once the company's Debt / Total Capital Ratio goes above a certain level, **the Costs of both Debt and Equity will start to increase**.

With more Debt, the company stands a higher chance of going bankrupt – which increases the risk for *all* the investors.

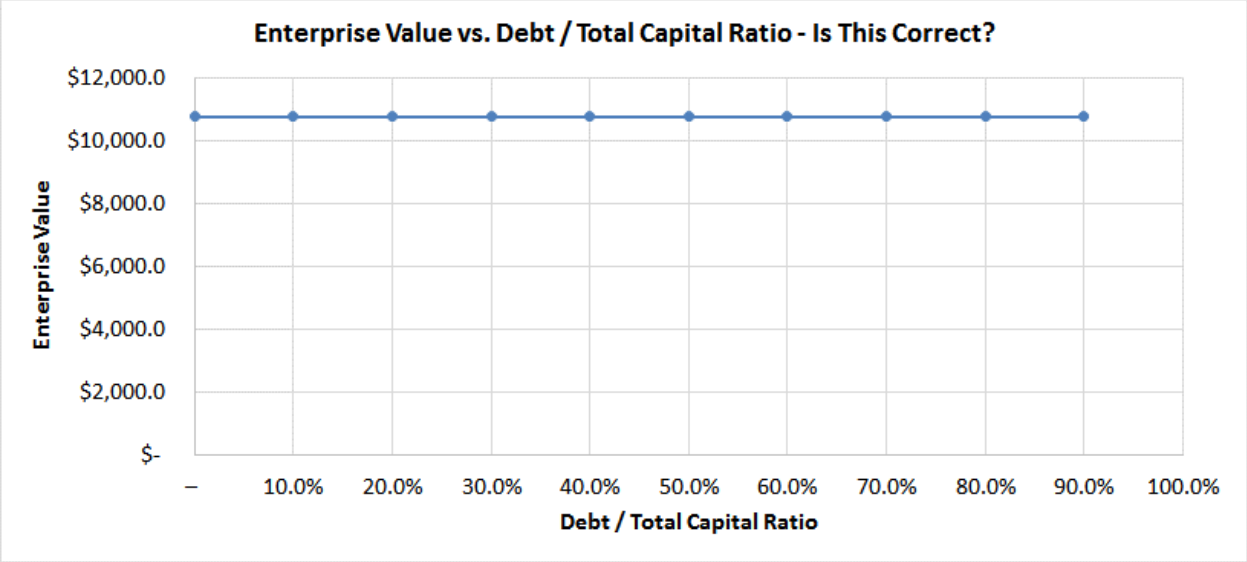
Here's a table so you can see the data in the graph above:

How Different Factors Impact WACC, the Cost of Debt, and the Cost of Equity:

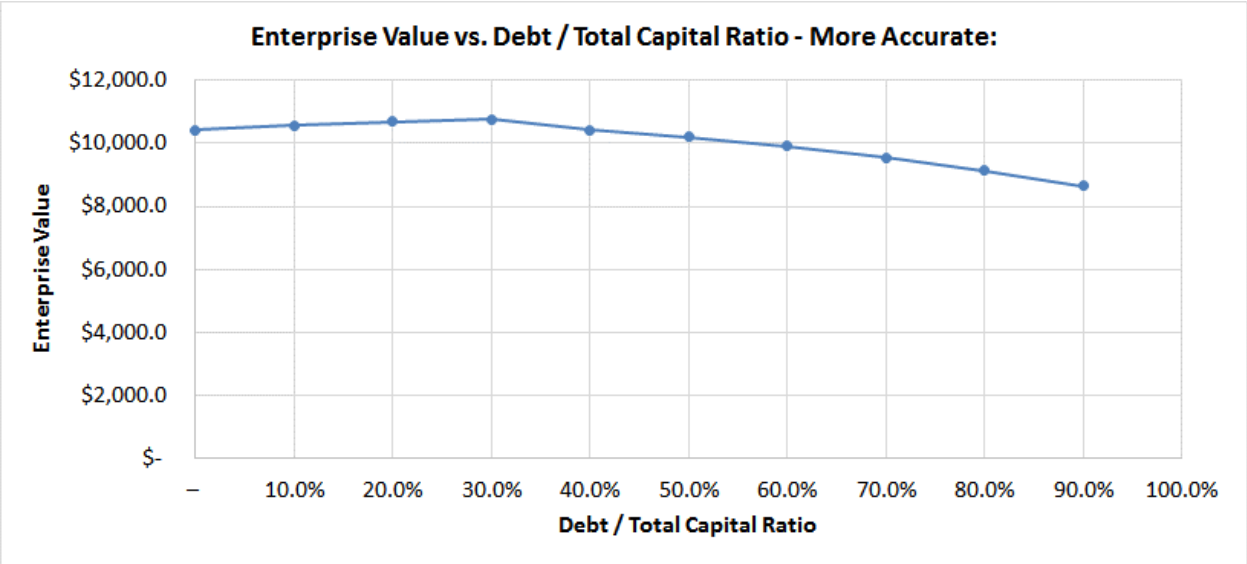
Debt / Total Cap.:	Debt / Equity:	Relevered Beta:	Risk Spread:	Cost of Debt: Pre-Tax:	Cost of Debt: After-Tax:	Cost of Equity:	Implied WACC:
–	–	0.72	1.0%	3.6%	2.2%	7.7%	7.7%
10.0%	11.1%	0.77	1.5%	4.1%	2.5%	8.0%	7.4%
20.0%	25.0%	0.83	2.0%	4.6%	2.8%	8.4%	7.3%
30.0%	42.9%	0.90	2.5%	5.1%	3.1%	8.9%	7.2%
40.0%	66.7%	1.01	5.0%	7.6%	4.6%	9.7%	7.6%
50.0%	100.0%	1.15	6.0%	8.6%	5.2%	10.7%	7.9%
60.0%	150.0%	1.37	7.0%	9.6%	5.8%	12.2%	8.3%
70.0%	233.3%	1.73	8.0%	10.6%	6.4%	14.7%	8.9%
80.0%	400.0%	2.44	9.0%	11.6%	7.0%	19.7%	9.5%
90.0%	900.0%	4.60	10.0%	12.6%	7.6%	34.8%	10.3%

So what does that mean for the **Implied Enterprise Value?**

It means that the following graph for Implied Enterprise Value at different levels of Debt and Equity is **not quite accurate**:



In reality, the graph would look more like this one:



The company's Implied Enterprise Value **doesn't change that much** over reasonable levels of Debt – but it starts to change rapidly at much higher Debt percentages.

Here's an example of what might happen when you calculate the Implied Enterprise Value, and you use different assumptions for a company's capital structure:

Debt / Total Capital:	Debt / Equity:	Relevered Beta:	Risk Spread:	Cost of Debt: Pre-Tax:	Cost of Debt: After-Tax:	Cost of Equity:	Implied WACC:	"Accounting" Enterprise Value:	Implied Enterprise Value:
–	–	0.72	1.0%	3.6%	2.2%	7.7%	7.7%	$ 10,770.6	$ 10,413.3
10.0%	11.1%	0.77	1.5%	4.1%	2.5%	8.0%	7.4%	10,770.6	10,576.3
20.0%	25.0%	0.83	2.0%	4.6%	2.8%	8.4%	7.3%	10,770.6	10,696.1
30.0%	42.9%	0.90	2.5%	5.1%	3.1%	8.9%	7.2%	10,770.6	10,770.6
40.0%	66.7%	1.01	5.0%	7.6%	4.6%	9.7%	7.6%	10,770.6	10,431.4
50.0%	100.0%	1.15	6.0%	8.6%	5.2%	10.7%	7.9%	10,770.6	10,214.3
60.0%	150.0%	1.37	7.0%	9.6%	5.8%	12.2%	8.3%	10,770.6	9,918.1
70.0%	233.3%	1.73	8.0%	10.6%	6.4%	14.7%	8.9%	10,770.6	9,552.0
80.0%	400.0%	2.44	9.0%	11.6%	7.0%	19.7%	9.5%	10,770.6	9,126.8
90.0%	900.0%	4.60	10.0%	12.6%	7.6%	34.8%	10.3%	10,770.6	8,654.4

The company gets riskier and riskier for *all* investors as it takes on more Debt.

Initially, the Discount Rate decreases as the company uses more Debt, but past a certain point, more Debt starts *increasing* risk and therefore *increasing* the Discount Rate.

If you pretend that the Discount Rate does NOT change as the company uses more Debt, you get these results.

But in reality, the Discount Rate WILL change, so these results are more accurate.

This concept applies more readily to the *Implied* Enterprise Value than to *Current* Enterprise Value.

If a company raises more Debt in real life, its Current Enterprise Value will probably *not* change overnight. But if it is expected to have more Debt going forward, its Current Enterprise Value will start to change.

Here's why the Costs of Debt and Equity start to change with different capital structures, and why capital structure, therefore, impacts Enterprise Value:

1. **Taxes** – Interest paid on Debt is tax-deductible, but Common Dividends and Preferred Dividends are not. Since the tax treatments differ, Enterprise Value is **NOT** affected in the same way by additional Debt vs. additional Equity.

2. **Bankruptcy Risk** – Debt and some types of Preferred Stock increase the chances of a company going bankrupt because of the Interest Expense (or mandatory dividends) and the requirement to repay the principal in the future. If a company raises Equity, there's no additional risk of bankruptcy because it won't owe cash payments to anyone.

3. **Agency Costs** – Debt investors want to earn their interest and receive their money back at the end. But Equity investors want the company to **grow** because they have **unlimited upside**. But since Debt investors cannot earn *more than* the interest rate, they want the company to be as conservative as possible and just focus on paying them back. These conflicting agendas mean that Debt is **not** equivalent to Equity.

4. **Efficient Markets** – This idea that Debt, Equity, and Preferred Stock are equivalent assumes that the markets are efficient and that companies' share prices always incorporate and reflect all relevant information. These assumptions are often wrong, especially for smaller, less-well-known companies.

The Bottom Line: This section is not meant to "disprove" the concept of Enterprise Value.

Enterprise Value is critical because it *does* represent the value of a company's core business operations to all the investors in the company.

Our point is that it's not *really* "capital structure-neutral," as some sources claim.

So instead of thinking about it as: "Changes to a company's capital structure may affect its Equity Value, but not its Enterprise Value," it's better to think of it as:

"Changes to a company's capital structure may affect its Equity Value by significantly *more* than they affect its Enterprise Value."

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Key Rule #5: How Events Impact Enterprise Value and Equity Value

Common interview questions about Enterprise Value and Equity Value include the following:

- "What happens to a company's Enterprise Value and its EV / EBITDA if it raises $100 of Debt?"
- "What happens to a company's Equity Value and its P / E multiple if it issues $100 in Dividends?"
- "A company has excess Cash. How do its Equity Value and Enterprise Value change if it chooses to repurchase shares vs. repay Debt?"
- "A CEO finds $100 of Cash on the street and adds it to the company's bank account. How do Equity Value and Enterprise Value change?"

These questions are easy to answer if you remember the definitions of Equity Value and Enterprise Value:

- **Equity Value** = Value of Core-Business Assets + Value of Non-Core-Business Assets
- **Enterprise Value** = Value of Core-Business Assets

- **Equity Value** = Value to Equity Investors
- **Enterprise Value** = Value to Equity Investors + Value to Debt Investors + Value to Preferred Investors (and possibly others)

To assess what happens to the valuation multiples, remember that **only the numerator changes IMMEDIATELY after**.

Let's take the example of the CEO finding $100 of extra cash. Here's the reasoning:

Cash is a non-core-business Asset.

But when a company "gets" a new Asset, you have to attribute it to a *source of funding* on the L&E side of the Balance Sheet.

In this case, the funding source is the company's "internal operations."

Since a company's Equity on the Balance Sheet represents *what it has saved up internally*, Equity on the Balance Sheet increases.

Equity Value includes the value of core-business Assets plus non-core-business Assets, but only to common shareholders, so Equity Value increases.

It increases not just because Cash is a non-core-business Asset, but also because *the increase was attributed to Equity on the Balance Sheet*.

Enterprise Value includes only core-business Assets, but to all investors. This Cash is **not** a core-business Asset, and it also doesn't represent any investor group outside of equity investors.

Therefore, Enterprise Value stays the same.

Any multiples based on Enterprise Value, such as EV / Revenue, EV / EBITDA, and EV / EBIT, also stay the same.

The P / E multiple will increase because the **numerator** – Equity Value – increases, but the denominator stays the same.

"Finding extra cash" is like buying a house, finding extra tools or supplies you don't need, and then deciding that you'll sell them right away.

Yes, they increase the "list price" of the house, but you're going to sell them immediately after you buy the house, so **the core value of the house does not change**.

The house's core value would change only if you "find" an extra room, a sturdier foundation, or something else that makes the house itself more valuable (which is a bit absurd – how could you just "find" an extra room?).

And it's the same with a company: Its Enterprise Value changes only if something related to its core business, such as its customers, employees, or ability to make and sell products, changes.

When you answer these questions, you should also point out that there's a difference between **theory** and **reality**.

Vivendi SA - Equity Value, Enterprise Value, and Financial Data:	
Company Name:	Vivendi SA
Current Share Price:	€ 18.76
Basic Shares Outstanding (Millions):	1,343
Diluted Shares Outstanding (Millions):	1,352
Diluted Equity Value:	**€ 25,356**
(-) Cash & Cash-Equivalents:	(868)
(-) Other Investments:	(659)
(-) Equity Investments:	(290)
(-) Other Non-Core Assets, Net:	(17,983)
(-) Value of Net Operating Losses:	-
(+) Total Debt:	12,243
(+) Preferred Stock:	-
(+) Noncontrolling Interests:	1,659
(+) Unfunded Pension Obligations:	674
(+) Capital Leases:	-
(+) Restructuring & Legal Liab.:	2,849
Enterprise Value:	**€ 22,981**
Last Twelve Month (LTM) Revenue:	€ 11,858
Last Twelve Month (LTM) EBITDA:	2,099
Last Twelve Month (LTM) Net Income:	755
LTM EV / Revenue:	1.9 x
LTM EV / EBITDA:	10.9 x
LTM P / E (Equity Value / Net Income):	33.6 x

In theory, Enterprise Value and Enterprise Value-based multiples will not change after financing events take place.

In reality, they will change a bit, but by *far less* than Equity Value and Equity Value-based multiples.

Here are a few examples of common questions and answers, using Vivendi (a French telecom/media conglomerate) as the example company.

Its Equity Value and Enterprise Value initially look like the diagram on the left-hand side of this text.

At this point, the company was planning to divest several divisions, which explains the very high "Other Non-Core Assets, Net" figure.

Raising and Paying Off Debt

What if It Raises EUR 1,000 in Debt?	
Cash Changes By:	1,000
Debt Changes By:	1,000
Equity Changes By:	-
Preferred Stock Changes By:	-
Diluted Equity Value:	**€ 25,356**
(-) Cash & Cash-Equivalents:	(1,868)
(-) Other Investments:	(659)
(-) Equity Investments:	(290)
(-) Other Non-Core Assets, Net:	(17,983)
(-) Value of Net Operating Losses:	-
(+) Total Debt:	13,243
(+) Preferred Stock:	-
(+) Noncontrolling Interests:	1,659
(+) Unfunded Pension Obligations:	674
(+) Capital Leases:	-
(+) Restructuring & Legal Liab.:	2,849
Enterprise Value:	**€ 22,981**
LTM EV / Revenue:	1.9 x
LTM EV / EBITDA:	10.9 x
LTM P / E:	33.6 x

What if It Repays EUR 1,000 of Debt?	
Cash Changes By:	(1,000)
Debt Changes By:	(1,000)
Equity Changes By:	-
Preferred Stock Changes By:	-
Diluted Equity Value:	**€ 25,356**
(-) Cash & Cash-Equivalents:	132
(-) Other Investments:	(659)
(-) Equity Investments:	(290)
(-) Other Non-Core Assets, Net:	(17,983)
(-) Value of Net Operating Losses:	-
(+) Total Debt:	11,243
(+) Preferred Stock:	-
(+) Noncontrolling Interests:	1,659
(+) Unfunded Pension Obligations:	674
(+) Capital Leases:	-
(+) Restructuring & Legal Liab.:	2,849
Enterprise Value:	**€ 22,981**
LTM EV / Revenue:	1.9 x
LTM EV / EBITDA:	10.9 x
LTM P / E:	33.6 x

With these changes, nothing happens to Enterprise Value because the higher or lower Cash balance offsets the change in Debt.

Equity Value does not change because issuing and repaying Debt does not impact a company's Equity in any way.

So no multiples here change.

Issuing and Repurchasing Shares

These changes are also straightforward because they impact **Equity Value** and **Cash**, but nothing else.

Issuing shares will shift more of the company's capital structure to Equity, but will not affect Enterprise Value.

As a result, the P/E multiples change, but the Enterprise Value-based ones do not.

What if It Issues EUR 1,000 of Shares?	
Cash Changes By:	1,000
Debt Changes By:	-
Equity Changes By:	1,000
Preferred Stock Changes By:	-
Diluted Equity Value:	**€ 26,356**
(-) Cash & Cash-Equivalents:	(1,868)
(-) Other Investments:	(659)
(-) Equity Investments:	(290)
(-) Other Non-Core Assets, Net:	(17,983)
(-) Value of Net Operating Losses:	-
(+) Total Debt:	12,243
(+) Preferred Stock:	-
(+) Noncontrolling Interests:	1,659
(+) Unfunded Pension Obligations:	674
(+) Capital Leases:	-
(+) Restructuring & Legal Liab.:	2,849
Enterprise Value:	**€ 22,981**
LTM EV / Revenue:	1.9 x
LTM EV / EBITDA:	10.9 x
LTM P / E:	34.9 x

What if It Repurchases EUR 1,000 of Shares?	
Cash Changes By:	(1,000)
Debt Changes By:	-
Equity Changes By:	(1,000)
Preferred Stock Changes By:	-
Diluted Equity Value:	**€ 24,356**
(-) Cash & Cash-Equivalents:	132
(-) Other Investments:	(659)
(-) Equity Investments:	(290)
(-) Other Non-Core Assets, Net:	(17,983)
(-) Value of Net Operating Losses:	-
(+) Total Debt:	12,243
(+) Preferred Stock:	-
(+) Noncontrolling Interests:	1,659
(+) Unfunded Pension Obligations:	674
(+) Capital Leases:	-
(+) Restructuring & Legal Liab.:	2,849
Enterprise Value:	**€ 22,981**
LTM EV / Revenue:	1.9 x
LTM EV / EBITDA:	10.9 x
LTM P / E:	32.3 x

Issuing Common or Preferred Dividends

What if It Issues EUR 1,000 in Dividends?	
Cash Changes By:	(1,000)
Debt Changes By:	-
Equity Changes By:	(1,000)
Preferred Stock Changes By:	-
Diluted Equity Value:	**€ 24,356**
(-) Cash & Cash-Equivalents:	132
(-) Other Investments:	(659)
(-) Equity Investments:	(290)
(-) Other Non-Core Assets, Net:	(17,983)
(-) Value of Net Operating Losses:	-
(+) Total Debt:	12,243
(+) Preferred Stock:	-
(+) Noncontrolling Interests:	1,659
(+) Unfunded Pension Obligations:	674
(+) Capital Leases:	-
(+) Restructuring & Legal Liab.:	2,849
Enterprise Value:	**€ 22,981**
LTM EV / Revenue:	1.9 x
LTM EV / EBITDA:	10.9 x
LTM P / E:	32.3 x

Note that both Common and Preferred Dividends **affect Equity Value and Enterprise Value in the same way**.

Issuing either type of Dividend reduces a company's Equity on the Balance Sheet (Retained Earnings specifically) and therefore reduces its Equity Value as well – since Equity Value represents the *market value* of a company's Equity.

The company uses Cash to issue these Dividends, so its Cash balance falls.

Enterprise Value doesn't change because the Cash and Equity changes offset each other.

So the Enterprise Value-based multiples stay the same, while the P/E multiple changes.

Other Variations

As with the "multi-step Accounting questions," you can answer other variations by working through the individual changes.

For example, what if a company raises $1,000 in Debt, issues $500 in Dividends, and keeps $500 of it in Cash?

The $1,000 Debt issuance will increase Cash and Debt by $1,000, so Enterprise Value stays the same. Equity Value doesn't change because the Cash increase was funded by non-equity investors.

After the company issues $500 in Dividends, its Equity Value falls by $500, but its Enterprise Value stays the same because the reduced Cash and reduced Equity Value cancel each other out.

So its P / E multiple declines and its Equity Value falls by $500, but everything else stays the same.

If you get a question like: "A company raises $1,000 in Equity and uses it to purchase PP&E. What happens?" then you need to think about whether or not the purchased item is a **core-business Asset**.

In this question, for example, $1,000 of Equity will increase Equity Value by $1,000, but the $1,000 in extra Cash offsets the change and Enterprise Value stays the same.

The PP&E *is* a core-business Asset, so this purchase will boost Enterprise Value by $1,000.

But Equity Value stays the same after this step – it's still $1,000 higher.

That's because **the value of the company's Total Assets has not changed**. Cash decreased by $1,000, but PP&E increased by $1,000, so Total Assets remained the same.

Equity Value includes the value of all the company's Assets, so it doesn't change.

If the company had purchased $1,000 in Short-Term Investments with this Cash, then its Equity Value would still be $1,000 higher for the same reason: Total Assets haven't changed.

But its Enterprise Value would **NOT** increase because Short-Term Investments are **not** a core-business Asset.

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