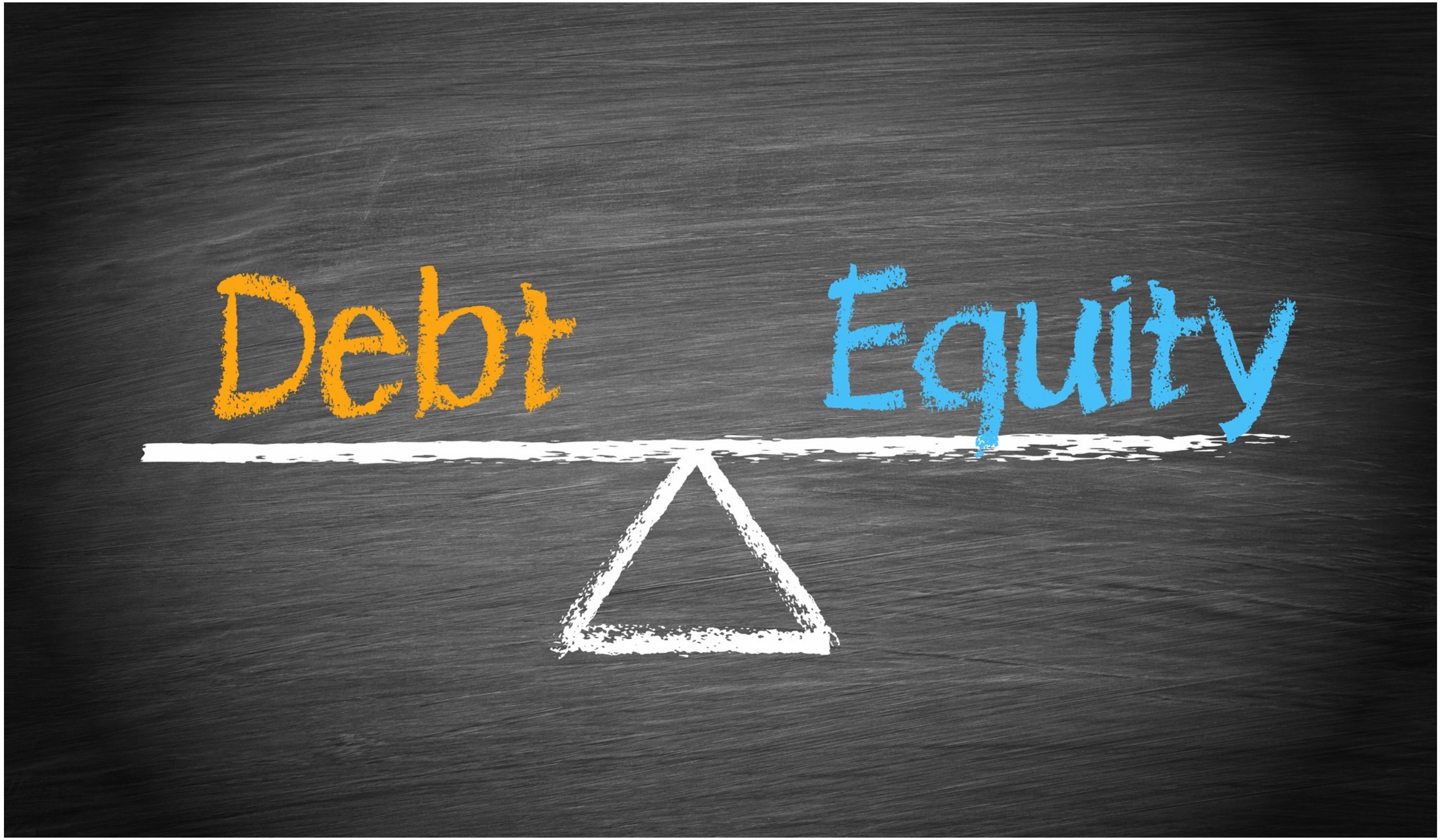
Financial Leverage (Debt) Ratios



Debt Management Ratios…

Debt Management ratios are an indication of a company's credit worthiness.

There is always tension for management:

- Banks want a low debt ratio to ensure it gets paid back.
- Investors want higher debt ratios, because debt is used to purchase assets that will improve productivity of the company.
- Investors also like higher debt because then the company doesn't ask them for more money (equity).

Debt Management Ratios…

Some Terminology

Companies often take out a loan when they need to purchase expensive items.

Just like with your mortgage, the loaning company wants to know the credit-worthiness of the company (i.e., will it be able to pay back the principal and interest…)

A number of ratios address this question of "credit worthiness".

A company missing a loan payment is the same as you missing a mortgage payment – the bank isn't happy and can "call" the loan, meaning the company has to pay it all back at once.

And since it couldn't pay the loan payment in the first place, it likely can't pay the entire loan back either: it thereby "defaults" on the loan.

Debt Management Ratios…

Some Terminology

Default: when a company (or person), cannot pay the interest or principal on a loan when it is due.

Bankruptcy: the legal proceeding when a company can no longer pay its creditors, such as its banks or suppliers.

> ***Chapter 7 Bankruptcy**: The company is done. It sells (liquidates) all of its assets and pays off creditors until it runs out of money.*
>
> ***Chapter 11 Bankruptcy**: The company is in "restructure" mode. The courts allow the company to reorganize, create a debt repayment plan, and keep on running.*

Creditors (i.e., banks) don't want to lose money due to the bankruptcy of its loan customers. No one wins in the case of a bankruptcy – and everyone works to figure out how to avoid it.

Debt Management Ratios…

Does the company have too much debt?

- Debt Ratio: indicates the total debt relative to total assets.
- Debt-to-Equity Ratio: indicates total debt relative to the company’s net worth.

Can the company pay the interest on the debt?

- Interest Coverage Ratio: reflects the cash available to pay interest on the debt.
- Times Interest Earned Ratio: another measure of the ability to pay interest on the debt.

Debt Ratio…

Indicates the company's financial leverage (debt), accounting for its total debt (short-term and long-term) relative to its assets.

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

A Debt Ratio < 1 indicates the company has sufficient assets to cover its debt obligations.

A Debt Ratio > 1 indicates the company has a negative net worth, never a good sign.

Bankers want a low ratio to ensure any loan it gives the company it gets paid back – with interest!

Debt-to-Equity Ratio…

A measure of the company's level of debt relative to its net worth.

$$\text{Debt} - \text{to} - \text{Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Shareholder Equity}}$$

While Debt-to-Equity ratios can vary considerably:

- less than 1 is considered safe
- more than 2 is considered high

Total Liabilities entail both principal and interest payments, which must be paid in both good times and not so good times.

If company is too highly "leveraged" (i.e., a high Debt-to-Equity ratio), it may be more difficult to get additional loans when it needs them the most.

Some Terminology…

Investors want to know how the business has done based on the sale of its products and services.

Investors are less concerned with non-operational issues (i.e, interest income) or things the company has little control over (e.g. taxes).

EBIT: Earnings before Interest & Taxes

The profitability of a company due to sales of its products and service, less COGS and Operating Expenses.

EBIT is the same as the Operating Income on the Income Statement

Some Terminology…

To get a measure of *cash flow* from operations, you need to add back those non-cash items from the Income Statement: Depreciation and Amortization.

EBITDA (“ee-bit-dah”): Earnings before Interest, Taxes, Depreciation & Amortization

EBITDA is used to compare profitability among companies because it eliminates the impacts of non-operational issues such as financing and tax-related expenses.

Being able to pay loan interest…

Interest Coverage Ratio: indicates the company's cash available to pay the interest on its loans.

$$\text{Interest Coverage Ratio} = \frac{\text{EBITDA}}{\text{Interest Expense}}$$

An Interest Coverage Ratio ~ 5 is considered acceptable.

Times Interest Earned (TIE) Ratio: similar to the Interest Coverage Ratio but uses EBIT.

$$\text{Times Interest Earned Ratio} = \frac{\text{EBIT}}{\text{Interest Expense}}$$

Commonly used but does not tell us as much because EBIT includes non-cash items such as Depreciation & Amortization – and so does not reflect the actual amount of cash available.

Main Takeaways…

Debt Management Ratios tell management and creditors how comfortable the company is in paying back its loans.

The company's degree of financial leverage is determined from:

- Debt Ratio: indicates the total debt relative to total assets.
- Debt-to-Equity Ratio: indicates total debt relative to the company's net worth.

The company's ability to pay the interest on its debt is determined from:

- Interest Coverage Ratio: reflects the cash available to pay interest on the debt.
- Times Interest Earned Ratio: another similar measure

Next Time…

Investment Ratios

Credits & References

Slide 1: Debt and Equity Balance Concept by DOC RABE Media, Adobe Stock (133702617.jpeg).

Slide 12: Hand with marker writing the word ROI - Return on Investment by gustavofrazao, Adobe Stock (89992321.jpeg).