



# DEBT-DEFINITIONS

## Debt

### What is 'Debt'

Debt is an amount of money borrowed by one party from another. Debt is used by many corporations and individuals as a method of making large purchases that they could not afford under normal circumstances. A debt arrangement gives the borrowing party permission to borrow money under the condition that it is to be paid back at a later date, usually with interest.

The most common forms of debt are loans, including mortgages and auto loans, and credit card debt. Under the terms of a loan, the borrower is required to repay the balance of the loan by a certain date, typically several years in the future. The terms of the loan also stipulate the amount of interest that the borrower is required to pay annually, expressed as a percentage of the loan amount. Interest is used as a way to ensure that the lender is compensated for taking on the risk of the loan while also encouraging the borrower to repay the loan quickly in order to limit his total interest expense.

Credit card debt operates in the same way as a loan, except that the borrowed amount changes over time according to the borrower's need, up to a predetermined limit, and has a rolling, or open-ended, repayment date.

### Corporate Debt

In addition to loans and credit card debt, companies that need to borrow funds have other debt options. Bonds and commercial paper are common types of corporate debt that are not available to individuals.

Bonds are a type of debt instrument that allows a company to generate funds by selling the promise of repayment to investors. Both individuals and institutional investment firms can purchase bonds, which typically carry a set interest, or coupon, rate. If a company needs to raise \$1 million to fund the purchase of new equipment, for example, it can issue 1,000 bonds with a face value of \$1,000 each. Bondholders are promised repayment of the face value of the bond at a certain date in the future, called the maturity date, in addition to the promise of regular interest payments throughout the intervening years. Bonds work just like loans, except the company is the borrower, and the investors are the lenders, or creditors.

Commercial paper is simply short-term corporate debt with a maturity of 270 days or less.



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## Good Debt Vs. Bad Debt

In corporate finance, there is a lot of attention paid to the amount of debt a company has. A company that has a large amount of debt may not be able to make its interest payments if sales drop, putting the business in danger of bankruptcy. Conversely, a company that uses no debt may be missing out on important expansion opportunities.

Different industries use debt differently, so the "right" amount of debt varies from business to business. When assessing the financial standing of a given company, therefore, various metrics are used to determine if the level of debt, or leverage, the company uses to fund operations is within a healthy range.

## Debt Service

Debt service is the cash that is required to cover the repayment of interest and principal on a debt for a particular period. If an individual is taking out a mortgage or a student loan, the borrower needs to calculate the annual debt service required on each loan, and, in the same way, companies must meet debt service requirements for loans and bonds issued to the public. The ability to service debt is a factor when a company needs to raise additional capital to operate the business.

Before a company approaches a banker for a commercial loan or considers what rate of interest to offer for a bond issue, the firm needs to compute the debt service coverage ratio. This ratio helps to determine the borrower's ability to make debt service payments because it compares the company's net income to the amount of principal and interest the firm must pay. If a lender decides that a business cannot generate consistent earnings to service debt, the lender doesn't make the loan.

## How the Debt Service Coverage Ratio Works

The debt service coverage ratio is defined as net operating income divided by total debt service, and net operating income refers to the earnings generated from a company's normal business operations. Assume, for example, that ABC Manufacturing makes furniture and that the firm sells a warehouse for a gain. The income generated from the warehouse sale is non-operating income because the transaction is unusual. Assume that operating income totaling \$10 million is produced from ABC's furniture sales and those earnings are included in the debt service calculation. If ABC's principal and interest payments due within a year total \$2 million, the debt service coverage ratio is ( $\$10 \text{ million income} / \$2 \text{ million debt service}$ ), or 5. The ratio indicates that ABC has \$8 million in earnings above the required debt service, which means the firm can take on more debt.



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## Factoring in Leverage

Both lenders and bondholders are interested in a firm's leverage, and this term refers to the total amount of debt a company uses to finance asset purchases. If a business issues more debt, the company needs to generate higher profits in the income statement to service the debt, and a firm must be able to consistently generate profits to carry a high debt load. ABC, for example, is generating excess earnings and can service more debt, but the company must produce a profit every year to service each year's debt service.

### Examples of Capital Structure

Decisions about debt impact a firm's capital structure, which is the proportion of total capital raised through debt vs. equity. A company with consistent, reliable earnings can raise more funds using debt, while a business with inconsistent profits must issue equity (common stock) to raise funds. Utility companies, for example, have the ability to generate consistent earnings, and these firms raise the majority of capital using debt, with less money raised through equity.

## Debt Consolidation

Debt consolidation means taking out a new loan to pay off a number of liabilities and consumer debts, generally unsecured ones. In effect, multiple debts are combined into a single, larger piece of debt, usually with more favorable pay-off terms: a lower interest rate, lower monthly payment or both. Consumers can use debt consolidation as a tool to deal with student loan debt, credit card debt and other types of debt.

### Methods of Debt Consolidation

There are several ways consumers can lump debts into a single payment. One is to consolidate all their credit card payments onto one new credit card – which can be a good idea if the card charges little or no interest for a period of time – or utilize an existing credit card's balance transfer feature (especially if it's offering a special promotion on the transaction). Home equity loans or home equity lines of credit are another form of consolidation sought by some people, as the interest on this type of loan is deductible for borrowers taxpayers who itemize their deductions. There are also several consolidation options available from the federal government for those with student loans.

Theoretically, any use of one form of financing to pay off other debts is practicing debt consolidation. However, there are specific instruments called debt consolidation loans, offered by creditors as part of a plan to borrowers who have difficulty managing the number or



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size of their outstanding debts. Creditors are willing to do this for several reasons – one of them being that it maximizes the likelihood of collecting from a debtor. These loans are usually offered by financial institutions, such as banks and credit unions; there are also specialized debt-consolidation service companies.

There are two broad types of debt consolidation loans: secured and unsecured. Secured loans are backed by an asset of the borrower's, such as a house or a car, that works as collateral for the loan. More traditional, unsecured debt consolidation loans, which are not backed by assets, can be more difficult to obtain. They also tend to have higher interest rates and lower qualifying amounts. Even so, the interest rates are still typically less than the rates on credit cards. Also, the interest rate is fixed.

“Typically, the loan has to be paid off in three to five years,” says Harrine Freeman, CEO and owner of H.E. Freeman Enterprises, a credit repair and credit-counseling service in Bethesda, Md., and author of “How to Get Out of Debt.”

These types of loans don't erase the debt; they simply transfer all your debts to a different lender or type of loan. (In circumstances where you need actual debt relief or don't qualify for loans, it may be best to look into a debt settlement rather than, or in conjunction with, a debt consolidation. Debt settlement aims to reduce your obligations rather than just reducing the number of creditors. Individuals usually work with a debt-relief organization or credit-counseling service. These organizations do not make actual loans; instead, they try to renegotiate the borrower's current debts with creditors.)

## **Advantages of Debt Consolidation Loans**

Freeman says that debt consolidation loans are most helpful for those who have multiple debts, owe \$10,000 or more, are receiving frequent calls or letters from collection agencies, have accounts with high interest rates or monthly payments, are having difficulty making payments or are unable to negotiate lower interest rates on loans. Once in place, a debt consolidation plan will stop the collection agencies from calling (assuming the loans they're calling about have been paid off).

There may be a tax break, too. The Internal Revenue Service (IRS) does not allow you to deduct interest on any unsecured debt consolidation loans. If your consolidation loan is secured with an asset, however, you may qualify for a tax deduction. Debt consolidation loan interest payments are most often tax deductible when home equity is involved.

A consolidation loan may also be kind to your credit score down the road. “If the principal is paid down faster [than it would have been without the loan], the balance is paid off sooner, which helps to boost your credit score,” says Freeman.



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## How Debt Consolidation Works

For example, say an individual with three credit cards and a total of \$20,000 owing at a 22.99% annual rate compounded monthly needs to pay \$1047.37 a month for 24 months to bring the balances to zero. This works out to \$5136.88 being paid in interest alone. If the same individual were to consolidate those credit cards into a lower-interest loan at an 11% annual rate compounded monthly, he or she would need to pay \$932.16 a month for 24 months to bring the balance to zero. This works out to \$2,371.84 being paid in interest. The monthly savings is \$115.21, and over the life of the loan the amount of savings is \$2,765.04.

Even if the monthly payment stays the same, you can still come out ahead by streamlining your loans. Say that you currently have three credit cards that charge a 28% APR; they are maxed out at \$5,000 each and you're spending \$250 a month on each card's minimum payment. If you were to pay off each credit card separately, you would be spending \$750 per month for 28 months and you would end up paying a total of around \$5,441.73 in interest. However, if you transfer the balances of those three cards into one consolidated loan at a more reasonable 12% interest rate and you continue to repay the loan with the same \$750 a month, you'll pay roughly one-third of the interest (\$1,820.22), and you will be able to retire your loan five months earlier. This amounts to a total savings of \$7,371.52 (\$3,750 for payments and \$3,621.52 in interest).

Loan Details	Credit Cards (3)	Consolidation Loan
Interest %	28%	12%
Payments	\$750	\$750
Term	28 months	23 months
Bills Paid/Month	3	1
Principal	\$15,000 (\$5,000 * 3)	\$15,000
Interest	\$5,441.73 (\$1,813.91 * 3)	\$1,820.22 (\$606.74 * 3)
<b>Total</b>	<b>\$20,441.73</b>	<b>\$16,820.22</b>

Of course, borrowers must have the income and credit worthiness necessary to allow a new lender to offer them at a lower rate. Although each lender will probably require different documentation depending on your history, the most commonly required pieces of information include a letter of employment, two months' worth of statements for each credit card or loan you wish to pay off, and letters from creditors or repayment agencies.



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## Finding a Debt Consolidation Loan

If you have a good payment history with a bank, credit union or credit card company, asking that institution about a debt consolidation loan should be your first step. "If you can get your bank to approve a loan, that's great," says Tim Gagnon, assistant academic specialist of accounting at the D'Amore McKim School of Business at Northeastern University. "But your bank may not be looking to keep you as a client and your credit scores may not be high enough to meet their lending requirements."

If you're turned down by your bank or credit union, Gagnon suggests exploring private mortgage companies or lenders. "They tend to be less rigid on scores and ratios."

## How To Consolidate Debts

Once you get your debt-consolidation vehicle in place, how to decide which bill to tackle first? This may be decided by your lender, who may choose the order in which creditors are repaid.

If not, you should start by paying off your highest-interest debt first. However, if you have a lower-interest loan that is causing you more emotional and mental stress than the higher interest ones (like a personal loan that has stretched family relations), you may want to start with that one instead.

Once you pay off one debt, move the payments to the next set in a waterfall payment process until all of your bills are paid off.

## Potential Pitfalls

There are several pitfalls consumers should consider when consolidating debt.

**Extending the Loan Term:** Your monthly payment and interest rate might be lower, thanks to the new loan. But pay attention to the payment schedule: If it is substantially longer than that of your previous debts, you might be paying more in the long run. Most debt consolidation lenders make their money by stretching out the term of the loan past at least the average, if not the longest term, of the borrower's previous debt. This allows the lender to make a tidy profit even if it charges a lower interest rate.

Example: John has \$19,000 of credit card debt, a \$12,000 car loan and \$5,500 remaining on a school loan. His total monthly payments come to \$1,175. A debt-consolidation lender offers to roll his loans into a single note that charges a lower rate of interest and reduces his monthly payment to \$850. He gratefully accepts and saves \$325 per month. However, the longest term of John's previous loans was five years, and the new loan has a term of 90 months (seven and



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a half years). He will end up paying a total \$6,375, whereas with the old debts, the maximum he would've paid would have been \$5,875.

That's why doing your homework is important. Call your credit card issuer(s) to find out how long it would take to pay off the debt on each of your cards at its current interest rate. Then compare that to the length and cost of the consolidation loan you're considering.

**Hurting the Credit Score:** By rolling over your existing loans into a brand new loan, you are likely to see a modest negative impact on your credit score at first. Credit scores favor longer-standing debts with longer, more consistent payment histories. Replacing debts before the original contract would have called for is viewed negatively. You are also listed as having assumed a larger, newer debt, which increases your risk factor. And, of course, just as with any other type of credit account, a missed payment on a debt consolidation loan goes on your credit report.

In addition, closing out the old credit accounts (once they're paid off) and opening a single new one may reduce the total amount of credit available to you, raising your debt-to-credit utilization ratio. This can also ding your credit score, as lenders may see you with an increased ratio as less financially stable. However, if you consolidate credit card debt and end up improving your credit utilization rate – that is, the amount of potential credit you have that you're actually using – as a result, your score could rise later on.

**Example:** Sally rolls \$16,000 of credit card debt into a new loan. She cuts up her credit cards, but leaves the accounts open. If she has no other debt, she has effectively cut her debt-to-credit ratio in half, as she now has \$16,000 of unused credit available on her credit card accounts, plus her \$16,000 consolidation loan. If she were to close her old accounts, however, she would be using 100% of the credit she has available from her new loan, which would adversely affect her score.

**Jeopardizing assets:** It is significantly easier to obtain a secured consolidation loan than an unsecured one, which means that you may end up consolidating several unsecured debts (like credit card balance) into a larger secured debt. You may be pledging your property as collateral against much larger amounts than you had previously. For example, using a home equity loan or line of credit put your home at risk if you fail to make the required payments.

**Losing special terms or benefits:** Student loans have special provisions (such as interest rate discounts and rebates) that will disappear if you consolidate them with other debts. Those who default on consolidated school loans will usually have their tax refunds garnished and may even have their wages attached, for example.



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**Paying a lot of money to a debt-consolidation service:** These groups often charge hefty initial and monthly fees. And you may not need them. You can consolidate your debt yourself for free with a new personal loan from a bank, or low-interest credit card, for example.

## The Bottom Line

Replacing several multiple-rate loans with one, fixed-rate monthly payment certainly simplifies life. Don't consolidate just for convenience, however. Unless you're absolutely overwhelmed by multiple payment dates, the ease of a single monthly payment alone is not a sufficient reason to consolidate debt, given the pitfalls.

And remember: consolidating debt alone does not get you out of debt; improving spending and saving habits does. If you do combine your debts, resist the temptation to run up balances on your credit cards again; otherwise you'll be saddled repaying them *and* the new, consolidated loan. Consolidation is a tool to help you get out of the debt-laden doghouse, not to get you a nicer, more expensive doghouse.

## Secured Debt

Secured debt is debt backed or secured by collateral to reduce the risk associated with lending, such as a mortgage. If the borrower defaults on repayment, the bank seizes the house, sells it and uses the proceeds to pay back the debt. Assets backing debt or a debt instrument are considered security, which is why unsecured debt is considered a riskier investment. There are two primary ways a company can raise capital: debt and equity. Equity is ownership and implies a promise of future earnings, but if the company falters, the investor may lose her principal. Lured by the prospect of better growth opportunities, investors in equity have the implicit backing of the company but no real claim on company assets. Indeed, equity holders get paid last in case of bankruptcy. Debt, on the other hand, implies a promise of repayment and has a higher degree of seniority in the case of bankruptcy. As a result, debt holders are not as concerned about future earnings as they are about liquidation value. Within the world of debt, there is one particular class of securities that has a higher seniority than unsecured debt vehicles: secured debt vehicles.

In general, lenders are more concerned about the value of company assets than earnings quality because in the case of earnings decline, the company can sell assets. This is the informal course of action when firms are facing bankruptcy; however, some debt is contractually backed by specific assets. This debt is referred to as secured debt. Secured debt is a formal contract backed by assets that can be sold as collateral if the firm defaults on the loan. Due to its low risk profile, secured debt is favored among those companies with poor credit. Secured debt allows the borrower to shift the lender's focus to the liquidation value of assets rather than the borrower's creditworthiness.





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## Examples of Secured Debt

The most commonly cited example of a secured loan is a mortgage. Other examples include the service provided by pawn shops or the factoring of receivables. Pawn shops give the borrower a loan based on the value of whatever that borrower is willing to pawn. In this way, secured debt is at the foundation of the pawn shop business model. Many firms also make a habit of receiving funding through the financing of accounts receivable. If the company cannot make the payment, the lender can use customer receipts and promissory notes to secure repayment. Other examples include car loans and home equity lines of credit, also referred to as HELOCs,

## Cost of Debt

Cost of debt refers to the effective rate a company pays on its current debt. In most cases, this phrase refers to after-tax cost of debt, but it also refers to a company's cost of debt before taking taxes into account. The difference in cost of debt before and after taxes lies in the fact that interest expenses are deductible.

Cost of debt is one part of a company's capital structure, which also includes the cost of equity. A company may use various bonds, loans and other forms of debt, so this measure is useful for giving an idea as to the overall rate being paid by the company to use debt financing. The measure can also give investors an idea of the riskiness of the company compared to others, because riskier companies generally have a higher cost of debt.

## How to Calculate the Cost of Debt

To calculate its cost of debt, a company needs to figure out the total amount of interest it is paying on each of its debts for the year. Then, it divides this number by the total of all of its debt. The quotient is its cost of debt.

For example, say a company has a \$1 million loan with a 5% interest rate and a \$200,000 loan with a 6% rate. It has also issued bonds worth \$2 million at a 7% rate. The interest on the first two loans is \$50,000 and \$12,000, respectively, and the interest on the bonds equates to \$140,000. The total interest for the year is \$202,000. As the total debt is \$3.2 million, the company's cost of debt is 6.31%.

## How to Calculate the Cost of Debt After Taxes

To calculate after-tax cost of debt, subtract a company's effective tax rate from 1, and multiply the difference by its cost of debt. Do not use the company's marginal tax rate; rather, add together the company's state and federal tax rate to ascertain its effective tax rate.



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For example, if a company's only debt is a bond it has issued with a 5% rate, its pre-tax cost of debt is 5%. If its tax rate is 40%, the difference between 100% and 40% is 60%, and 60% of 5% is 3%. The after-tax cost of debt is 3%.

The rationale behind this calculation is based on the tax savings the company receives from claiming its interest as a business expense. To continue with the above example, imagine the company has issued \$100,000 in bonds at a 5% rate. Its annual interest payments are \$5,000. It claims this amount as an expense, and this lowers the company's income on paper by \$5,000. As the company pays a 40% tax rate, it saves \$2,000 in taxes by writing off its interest. As a result, the company only pays \$3,000 on its debt. This equates to a 3% interest rate on its debt.

## Net Debt

Net debt shows a business's overall financial situation by subtracting the total value of a company's liabilities and debts from the total value of its cash, cash equivalents and other liquid assets, a process called netting. All the information necessary to determine a company's net debt can be found on its balance sheet.

**Net Debt = (Short-Term Debt + Long-Term Debt) - Cash and Cash Equivalents**

**Net Debt = Short Term Debt + Long Term Debt - Cash & Cash Equivalents**

The net debt figure is used as an indication of a business's ability to pay off all its debts if they became due simultaneously on the day of calculation, using only its available cash and highly liquid assets.

## Total Debt

When calculating net debt, the first figure that is needed is the company's total debt. This includes long-term liabilities, such as mortgages and other loans that do not mature for several years, as well as short-term obligations, including rent, utilities, loan payments and interest due within the next year, credit card and accounts payable balances, and taxes.

### **Total Cash and Cash Equivalents**

The second component of the net debt calculation is total cash. Unlike the debt figure, the total cash includes only the company's current assets, or those that can be liquidated for cash very quickly. This includes highly liquid assets like cash, checking and savings account



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balances, accounts receivable, stocks, bonds and other marketable securities, and money market accounts. Depending on the operating cycle of the business in question, this may also include the value of any inventory on hand.

## Comprehensive Debt Analysis

The concept of net debt is particularly important in investing and is one of the most commonly used metrics in fundamental analysis. Stocks that perform well over time tend to be issued by companies that are financially healthy and able to afford to meet their obligations with ease. While the net debt figure is a great place to start, a prudent investor must also investigate the company's debt level in more detail. Important factors to consider are the actual debt figures – both short-term and long-term – and what percentage of the total debt needs to be paid off within the coming year.

The reason behind the debt is also important. A business can take on new debt financing to fund an expansion project, or it can use those funds to repay or refinance an older loan that it has not yet paid off, which may be a signal of deeper troubles. If the majority of the company's debts are short-term – meaning they must be repaid within 12 months – consider whether the business could afford to cover those obligations if its sales took a dive. If the company's current revenue stream is the only thing keeping it afloat, its long-term prospects may be in peril.

Because different types of businesses use debt differently, it is also important to compare a company's net debt to that of other companies within the same industry that have a similar business model and are of a comparable size.

## Debt Avalanche

A method of repaying debts in which a debtor allots enough money to make the minimum payment on each debt, then devotes any remaining debt-repayment funds to repaying the debt with the highest interest rate. Using the debt avalanche method, once the debt with the highest interest rate is completely paid off, the extra repayment funds go toward the next highest interest-bearing debt. This process continues until all the debts are paid off.

Here's how repayment by debt avalanche works: Let's say you allot \$500 every month to retire your three sources of debt: \$1,000 worth of credit card debt (annual interest rate: 20%), \$1,250 of car payments (6% interest rate) and a \$5,000 line of credit (8% interest). For simplicity's sake, assume each has a minimum monthly payment of \$50.

You'd need to allot \$150 toward paying each debt's minimum monthly payment ( $\$50 \times 3$ ). The remaining \$350 would be added to the money devoted to your highest-interest debt — in this

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case, you'd pay \$400 toward settling the credit card debt. Once the credit card debt has been completely paid off, the extra payment would go toward retiring the second-highest interest bearing debt (the line of credit). Finally, all \$500 would go to the debt with the lowest rate of interest (the car loan).

The major advantage of using the debt avalanche method is that it minimizes the amount of interest you pay, as long as you stick to the plan. It also minimizes the total amount of time it takes to get out of debt since interest doesn't accumulate as quickly.

An alternate technique of debt repayment is the debt snowball. Instead of paying off debts from highest interest to lowest, this method uses the money beyond the minimum payments to pay off debts from smallest to largest. Although it costs more in interest, the debt snowball method can be better for individuals who find that the early victories of paying off a number of small debts – making the total number of debts on their list less daunting – motivates them to stick with the plan and see it through.

## Long-Term Debt

Long-term debt consists of loans and financial obligations lasting over one year. Long-term debt for a company would include any financing or leasing obligations that are to come due in a greater than 12-month period. Long-term debt also applies to governments: nations can also have long-term debt.

In the U.K., long-term debts are known as "long-term loans."

Financial and leasing obligations, also called long-term liabilities, or fixed liabilities, would include company bond issues or long-term leases that have been capitalized on a firm's balance sheet. Often, a portion of these long-term liabilities must be paid within the year; these are categorized as current liabilities, and are also documented on the balance sheet. The balance sheet can be used to track the company's debt and profitability.

On a balance sheet, the company's debts are categorized as either financial liabilities or operating liabilities. Financial liabilities refer to debts owed to investors or stockholders; these include bonds and notes payable. Operating liabilities refer to the leases or unsettled payments incurred in order to maintain facilities and services for the company. These include everything from rented building spaces and equipment to employee pension plans.

Bonds are one of the most common types of long-term debt. Companies may issuing bonds to raise funds for a variety of reasons. Bond sales bring in immediate income, but the company ends up paying for the use of investors' capital due to interest payments.



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## Why Incur Long-Term Debt?

A company takes on long-term debt in order to acquire immediate capital. For example, startup ventures require substantial funds to get off the ground and pay for basic expenses, such as research expenses, Insurance, License and Permit Fees, Equipment and Supplies and Advertising and Promotion. All businesses need to generate income, and long-term debt is an effective way to get immediate funds to finance and operations.

Aside from need, there are many factors that go into a company's decision to take on more or less long-term debt. During the Great Recession, many companies learned the dangers of relying too heavily on long-term debt. In addition, stricter regulations have been imposed to prevent businesses from falling victim to economic volatility. This trend affected not only businesses, but also individuals, such as homeowners.

## Long-Term Debt: Helpful or Harmful?

Since debt sums tend to be large, these loans take many years to pay off. Companies with too much long-term debt will find it hard to pay off these debts and continue to thrive, as much of their capital is devoted to interest payments and it can be difficult to allocate money to other areas. A company can determine whether it has accrued too much long-term debt by examining its debt to equity ratio.

A high debt to equity ratio means the company is funding most of its ventures with debt. If this ratio is too high, the company is at risk of bankruptcy if it becomes unable to finance its debt due to decreased income or cash flow problems. A high debt to equity ratio also tends to put a company at a disadvantage against its competitors who may have more cash. Many industries discourage companies from taking on too much long-term debt in order to reduce the risks and costs closely associated with unstable forms of income, and they even pass regulations that restrict the amount of long-term debt a company can acquire.

For example, since the Great Recession, banks have begun to scrutinize companies' balance sheets more closely, and a high level of debt now can prevent a company from getting further debt financing. Consequently, many companies are adapting to this rule to avoid being penalized, such as taking steps to reduce their long-term debt and rely more heavily on stable sources of income.

A low debt to equity ratio is a sign that the company is growing or thriving, as it is no longer relying on its debt and is making payments to lower it. It consequently has more leverage with other companies and a better position in the current financial environment. However, the company must also compare its ratio to those of its competitors, as this context helps determine economic leverage.



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For example, Adobe Systems Inc. (ADBE) reported a higher amount of long-term debt in Q2 of 2015 than it had in the previous seven years. This debt is still low compared with many of its competitors, such as Microsoft Corp. (MSFT) and Apple Inc. (AAPL), so Adobe retains relatively the same place in the market. However, comparisons fluctuate with competitors such as Symantec Corp. (SYMC) and Quintiles Transnational (Q), who carry a similar amount of long-term debt as Adobe.

A company's long-term debt may also put bond investors at risk in an illiquid bond market. The question of the liquidity of the bond market has become an issue since the Great Recession, as banks that used to make markets for bond traders have been constrained by greater regulatory oversight.

Long-term debt is not all bad, though, and in moderation, it is necessary for any company. Think of it as a credit card for a business: in the short-term, it allows the company to invest in the tools it needs to advance and thrive while it is still young, with the goal of paying off the debt when the company is established and in the financial position to do so. Without incurring long-term debt, most companies would never get off the ground. Long-term debt is a given variable for any company, but how much debt is acquired plays a large role in the company's image and its future.

Bank loans and financing agreements, in addition to bonds and notes that have maturities greater than one year, would be considered long-term debt. Other securities such as repos and commercial papers would not be long-term debt, because their maturities are typically shorter than one year.

## Term Loan

A term loan is a loan from a bank for a specific amount that has a specified repayment schedule and a fixed or floating interest rate. For example, many banks have term-loan programs that can offer small businesses the cash they need to operate from month to month. Often, a small business uses the cash from a term loan to purchase fixed assets such as equipment for its production process.

A term loan is for equipment, real estate or working capital paid off between one and 25 years. The loan carries a fixed or variable interest rate, monthly or quarterly repayment schedule, and set maturity date. The loan requires collateral and a rigorous approval process to reduce the risk of repayment. A term loan is appropriate for an established small business with sound financial statements and a substantial down payment to minimize payment amounts and total loan cost.

### Types of Term Loans

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An intermediate-term loan runs less than three years, is paid in monthly installments from a company's cash flow and may have balloon payments. Repayment is tied to the useful life of the asset financed. A long-term loan runs for three to 25 years, is collateralized by a company's assets and requires monthly or quarterly payments from profits or cash flow. The loan limits other financial commitments the company may take on, including other debts, dividends or principals' salaries, and can require an amount of profit to be set aside for loan repayment.

## Example of Term Loan

A Small Business Administration (SBA) loan encourages long-term financing. Short-term loans and revolving credit lines are also available for assistance with a company's short-term and cyclical working capital needs. Maturities for long-term loans vary according to ability to repay, purpose of loan and useful life of the financed asset. Maximum loan maturities are seven years for working capital, 10 years for equipment and 25 years for real estate. A loan is repaid with monthly payments of principal and interest.

A fixed-rate loan payment remains the same because the interest rate is constant; a variable-rate loan requires a different payment amount when the interest rate changes. A lender may establish an SBA loan with interest-only payments during a company's startup or expansion phase; the business then has time to generate income before making full loan payments. Balloon payments are not allowed on most SBA loans. The SBA charges the borrower a prepayment fee only if the loan has a maturity of 15 years or more and is prepaid in the first three years. Every loan is secured by all available business and personal assets until the recovery value equals the loan amount or until all assets are pledged as reasonably available.

## Debt Load

The amount of debt or leverage that a company is carrying on its books. The amount of debt a firm is carrying can be found in the company's balance sheet, which most firms provide on a quarterly basis. Companies may incur this debt for numerous reasons such as expanding their business or making an acquisition.

A very useful insight into the financial health of a company is to compare the amount of debt a company is carrying to the assets or equity the company has. Dividing the total debt a company has by the total assets a company has gives what is called a *debt ratio*. A low debt ratio is usually a sign of a healthy company.

## Debt Financing

### What is 'Debt Financing'

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Debt financing occurs when a firm raises money for working capital or capital expenditures by selling bonds, bills or notes to individuals and/or institutional investors. In return for lending the money, the individuals or institutions become creditors and receive a promise the principal and interest on the debt will be repaid. The other way to raise capital in the debt markets is to issue shares of stock in a public offering; this is called equity financing.

When a company needs money, it can take three routes to obtain financing: cash, debt or some hybrid of the two. Equity represents an ownership stake in the company. It gives the shareholder a claim on future earnings, but it does not need to be paid back. If the company goes bankrupt, equity holders are the last in line to receive money. The first investors in line are the lenders. These are the investors that provide the company with debt financing. The amount of the investment loan, referred to as the principal, must be paid back. Companies can obtain debt financing through banks and bondholders.

Debt financing can be difficult to obtain, but for many companies, it provides funding at lower rates than equity financing, especially in periods of historically low interest rates. Another perk to debt financing is the interest on debt is tax deductible. Still, adding too much debt can increase the cost of capital, which reduces the present value of the company.

## **Interest Rates on Debt Financing**

Some investors in debt are only interested in principal protection, while others want a return in the form of interest. The rate of interest is determined by market rates and the creditworthiness of the borrower. Higher rates of interest imply a greater degree of default and therefore a higher level of risk. Higher interest rates help to compensate the borrower for the increased risk. On the other side of a high-yield investment is a high-risk borrower. In addition to paying interest, debt financing often requires the borrower to adhere to certain rules regarding financial performance. These rules are referred to as covenants.

## **Measuring Debt Financing**

One metric analysts use to measure and compare how much of a company's capital is being financed with debt financing is the debt-to-equity (D/E) ratio. For example, if total debt is \$2 billion and total stockholders' equity is \$10 billion, the D/E ratio is one to five, or 20%. This means for every \$1 of debt financing, there is \$5 of equity. In general, a low D/E ratio is preferable to a high one, though certain industries have a higher tolerance for debt than others. Both debt and equity can be found on the balance sheet.





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## Capital Structure

The capital structure is how a firm finances its overall operations and growth by using different sources of funds. Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings. Short-term debt such as working capital requirements is also considered to be part of the capital structure.

A firm's capital structure can be a mixture of long-term debt, short-term debt, common equity and preferred equity. A company's proportion of short- and long-term debt is considered when analyzing capital structure. When analysts refer to capital structure, they are most likely referring to a firm's debt-to-equity (D/E) ratio, which provides insight into how risky a company is. Usually, a company that is heavily financed by debt has a more aggressive capital structure and therefore poses greater risk to investors. This risk, however, may be the primary source of the firm's growth.

### Debt vs. Equity

Debt is one of the two main ways companies can raise capital in the capital markets. Companies like to issue debt because of the tax advantages. Interest payments are tax-deductible. Debt also allows a company or business to retain ownership, unlike equity. Additionally, in times of low interest rates, debt is abundant and easy to access.

Equity is more expensive than debt, especially when interest rates are low. However, unlike debt, equity does not need to be paid back if earnings decline. On the other hand, equity represents a claim on the future earnings of the company as a part owner.

## Debt-to-Equity Ratio as a Measure of Capital Structure

Both debt and equity can be found on the balance sheet. The assets listed on the balance sheet are purchased with this debt and equity. Companies that use more debt than equity to finance assets have a high leverage ratio and an aggressive capital structure. A company that pays for assets with more equity than debt has a low leverage ratio and a conservative capital structure. That said, a high leverage ratio and/or an aggressive capital structure can also lead to higher growth rates, whereas a conservative capital structure can lead to lower growth rates. It is the goal of company management to find the optimal mix of debt and equity, also referred to as the optimal capital structure.



# DEBT-DEFINITIONS

Analysts use the D/E ratio to compare capital structure. It is calculated by dividing debt by equity. Savvy companies have learned to incorporate both debt and equity into their corporate strategies. At times, however, companies may rely too heavily on external funding, and debt in particular. Investors can monitor a firm's capital structure by tracking the D/E ratio and comparing it against the company's peers.

## Total Debt-to-Capitalization Ratio

The total debt-to-capitalization ratio is a tool that measures the total amount of outstanding company debt as a percentage of the firm's total capitalization. The ratio is an indicator of the company's leverage, which is defined as using debt to purchase assets. Companies need to manage debt carefully because of the cash flow needed to make principal and interest payments. Calculated as:

$$\text{Total Debt to Capitalization} = \frac{(\text{Short-term Debt} + \text{Long-Term Debt})}{(\text{Short-term Debt} + \text{Long-Term Debt} + \text{Shareholders' Equity})}$$

Every business uses assets to generate sales and profits, and capitalization refers to the amount of money raised to purchase assets. A business can raise money by issuing debt to creditors or by selling stock to shareholders. The amount of capital raised is reported in the long-term debt and stockholders' equity accounts in the balance sheet.

### Factoring in Rate of Return

Both creditors and investors want to earn a rate of return on an investment. Bondholders, for example, earn interest income on debt securities, while equity investors earn a return on equity (ROE) through dividend payments and due to an increase in the price of the issuer's stock. If a company takes on too much debt, it runs the risk of insolvency, which means that the issuer cannot make principal and interest payments on debt.

### Examples of Capitalization

Assume, for example, that company ABC has short-term debt of \$10 million, long-term debt of \$30 million and shareholders' equity of \$60 million. The company's debt-to-capitalization ratio is calculated as follows:

$$\text{Total Debt to Capitalization} = (\$10 + 30) / (\$10 + \$30 + \$60) = 0.4 \text{ or } 40\%.$$

This ratio indicates that 40% of the company's capital structure consists of debt.



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Consider the capital structure of another company, XYZ, which has short-term debt of \$5 million, long-term debt of \$20 million and shareholders' equity of \$15 million. The firm's debt-to-capitalization ratio would be computed as follows:

$$\text{Total Debt to Capitalization} = (\$5 + 20) / (\$5 + \$20 + \$15) = 0.625 \text{ or } 62.5\%.$$

Although XYZ has a lower dollar amount of total debt (\$25 million versus \$40 million), debt comprises a significantly larger part of its capital structure. In the event of an economic downturn, XYZ may have a difficult time making the interest payments on its debt, compared to firm ABC. The acceptable level of total debt for a company depends on the industry in which it operates. While companies in capital-intensive sectors such as utilities, pipelines and telecommunications are typically highly leveraged, their cash flows have a greater degree of predictability than companies in other sectors that generate less consistent earnings.

## Debt/Equity Ratio

### What is the 'Debt/Equity Ratio'

Debt/Equity Ratio is a debt ratio used to measure a company's financial leverage, calculated by dividing a company's total liabilities by its stockholders' equity. The D/E ratio indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders' equity.

The formula for calculating D/E ratios can be represented in the following way:

$$\text{Debt - Equity Ratio} = \text{Total Liabilities} / \text{Shareholders' Equity}$$

The result may often be expressed as a number or as a percentage.

This form of D/E may often be referred to as risk or gearing.

This ratio can be applied to personal financial statements as well as corporate ones, in which case it is also known as the Personal Debt/Equity Ratio. Here, "equity" refers not to the value of stakeholders' shares but rather to the difference between the total value of a corporation or individual's assets and that corporation or individual's liabilities. The formula for this form of the D/E ratio, then, can be represented as:

$$D/E = \text{Total Liabilities} / (\text{Total Assets} - \text{Total Liabilities})$$

1. Given that the debt/equity ratio measures a company's debt relative to the total value of its stock, it is most often used to gauge the extent to which a company is taking on debts as a



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means of leveraging (attempting to increase its value by using borrowed money to fund various projects). A high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt. Aggressive leveraging practices are often associated with high levels of risk. This may result in volatile earnings as a result of the additional interest expense.

For example, suppose a company has a total shareholder value of \$180,000 and has \$620,000 in liabilities. Its debt/equity ratio is then 3.4444 ( $\$620,000 / \$180,000$ ), or 344.44%, indicating that the company has been heavily taking on debt and thus has high risk. Conversely, if it has a shareholder value of \$620,000 and \$180,000 in liabilities, the company's D/E ratio is 0.2903 ( $\$180,000 / \$620,000$ ), or 29.03%, indicating that the company has taken on relatively little debt and thus has low risk.

If a lot of debt is used to finance increased operations (high debt to equity), the company could potentially generate more earnings than it would have without this outside financing. If this were to increase earnings by a greater amount than the debt cost (interest), then the shareholders benefit as more earnings are being spread among the same amount of shareholders. However, if the cost of this debt financing ends up outweighing the returns that the company generates on the debt through investment and business activities, stakeholders' share values may take a hit. If the cost of debt becomes too much for the company to handle, it can even lead to bankruptcy, which would leave shareholders with nothing.

2. The personal debt/equity ratio is often used in financing, as when an individual or corporation is applying for a loan. This form of D/E essentially measures the dollar amount of debt an individual or corporation has for each dollar of equity they have. D/E is very important to a lender when considering a candidate for a loan, as it can greatly contribute to the lender's confidence (or lack thereof) in the candidate's financial stability. A candidate with a high personal debt/equity ratio has a high amount of debt relative to their available equity, and will not likely instill much confidence in the lender in the candidate's ability to repay the loan. On the other hand, a candidate with a low personal debt/equity ratio has relatively low debt, and thus poses much less risk to the lender should the lender agree to provide the loan, as the candidate would appear to have a reasonable ability to repay the loan.

## Limitations of 'Debt/Equity Ratio'

1. Like with most ratios, when using the debt/equity ratio it is very important to consider the industry in which the company operates. Because different industries rely on different amounts of capital to operate and use that capital in different ways, a relatively high D/E ratio may be common in one industry while a relatively low D/E may be common in another. For example, capital-intensive industries such as auto manufacturing tend to have a debt/equity ratio above 2, while companies like personal computer manufacturers usually are not

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particularly capital intensive and may often have a debt/equity ratio of under 0.5. As such, D/E ratios should only be used to compare companies when those companies operate within the same industry.

Another important point to consider when assessing D/E ratios is that the “Total Liabilities” portion of the formula may often be determined in a variety of ways by different companies, some of which are not actually the sum of all of the company’s liabilities. In some cases, companies will only incorporate debts (like loans and debt securities) into the liabilities portion of the formula, while omitting other kinds of liabilities (unearned revenue, etc.). In other cases, companies may calculate D/E in an even more specific way, including only long-term debts and excluding short-term debts and other liabilities. Yet, “long-term debt” here is not necessarily a term with a consistent meaning. It may include all long-term debts, but it may also exclude long-term debts nearing maturity, which are then categorized as “short-term” debts. Because of these differentiations, when considering a company’s D/E ratio one should try to determine how the ratio was calculated and should be sure to consider other ratios and performance metrics as well.

## Leverage Ratio

Companies rely on a mixture of owners' equity and debt to finance their operations. A leverage ratio is any one of several financial measurements that look at how much capital comes in the form of debt (loans), or assesses the ability of a company to meet financial obligations.

Too much debt can be dangerous for a company and its investors. Uncontrolled debt levels can lead to credit downgrades or worse. On the other hand, too few debts can also raise questions. If a company's operations can generate a higher rate of return than the interest rate on its loans, then the debt is helping to fuel growth in profits. A reluctance or inability to borrow may be a sign that operating margins are simply too tight.

There are several different specific ratios that may be categorized as a leverage ratio, but the main factors considered are debt, equity, assets and interest expenses.

A leverage ratio may also refer to one used to measure a company's mix of operating costs, giving an idea of how changes in output will affect operating income. Fixed and variable costs are the two types of operating costs; depending on the company and the industry, the mix will differ.

Finally, the consumer leverage ratio refers to the level of consumer debt as compared to disposable income and is used in economic analysis and by policymakers



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## Leverage Ratios for Evaluating Solvency and Capital Structure

The most well known financial leverage ratio is the debt-to-equity ratio. It is expressed as:

*Total Debt / Total Equity*

For example, if a company has \$10M in debt and \$20M in equity, it has a debt-to-equity ratio of  $0.50 = (\$10M/\$20M)$ . A high debt/equity ratio generally indicates that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result of the additional interest expense, and if it is very high, it may increase the chances of a default or bankruptcy. Typically a debt to equity ratio greater than 2.0 indicates a risky scenario for the investor, however this yardstick can vary by industry. Businesses that require large capital expenditures (CapEx) may need to secure more loans than other companies. It's a good idea to measure a firm's leverage ratios against past performance and its competitors' performance to better understand the data.

The financial leverage ratio is similar, but replaces debt with assets in the numerator:

*Avg. Total Assets/ Avg. Total Equity*

The financial leverage ratio is sometimes referred to as the equity multiplier. For example, a company has assets valued at \$2 billion and stockholder equity of \$1 billion. The equity multiplier value would be 2.0 ( $\$2 \text{ billion} / \$1 \text{ billion}$ ), meaning that one half of a company's assets are financed by equity. The balance must be financed by debt.

The financial leverage ratio is a component of the decomposed DuPont analysis for calculating return on equity (ROE):

$$ROE = \text{Net Profit Margin} \times \text{Asset Turnover} \times \text{Financial Leverage}$$

*Ratio*

An indicator that measures the total amount of debt in a company's capital structure is the debt-to-capitalization ratio, which measures a company's financial leverage. It is calculated as:

$$\text{Long-term Debt to Capitalization Ratio} = \text{Long-term Debt} / (\text{Long-Term Debt} + \text{minority interest} + \text{equity})$$

In this ratio, operating leases are capitalized and equity includes both common and preferred shares.



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*Total Debt to Capitalization Ratio = (current liabilities + Long-Term Debt) / (current liabilities + Long-Term Debt + minority interest + equity)*

## Degree of Financial Leverage

Degree of financial leverage (DFL) is a ratio that measures the sensitivity of a company's earnings per share (EPS) to fluctuations in its operating income, as a result of changes in its capital structure. It measures the percentage change in EPS for a unit change in earnings before interest and taxes (EBIT), and is represented as:

$$\text{DFL} = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

DFL can also be represented by the equation below:

$$\text{DFL} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest}}$$

This ratio indicates that the higher the degree of financial leverage, the more volatile earnings will be. Since interest is usually a fixed expense, leverage magnifies returns and EPS. This is good when operating income is rising, but it can be a problem when operating income is under pressure.

## Consumer Leverage Ratio

The consumer leverage ratio is used to quantify the amount of debt the average American consumer has, relative to their disposable income.

Some economists have stated that the rapid increase in consumer debt levels has been a main factor for corporate earnings growth over the past few decades. Others have blamed the high level of consumer debt as a major cause of the great recession.

*Consumer Leverage Ratio = Total household debt / Disposable personal income*

## Current Ratio

The current ratio is a liquidity ratio that measures a company's ability to pay short-term and long-term obligations. To gauge this ability, the current ratio considers the current



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total assets of a company (both liquid and illiquid) relative to that company's current total liabilities.

The formula for calculating a company's current ratio, then, is:

Current Ratio = Current Assets / Current Liabilities

The current ratio is called "current" because, unlike some other liquidity ratios, it incorporates *all current* assets and liabilities.

The current ratio is also known as the working capital ratio.

The current ratio is mainly used to give an idea of the company's ability to pay back its liabilities (debt and accounts payable) with its assets (cash, marketable securities, inventory, accounts receivable). As such, current ratio can be used to take a rough measurement of a company's financial health. The higher the current ratio, the more capable the company is of paying its obligations, as it has a larger proportion of asset value relative to the value of its liabilities.

A ratio under 1 indicates that a company's liabilities are greater than its assets and suggests that the company in question would be unable to pay off its obligations if they came due at that point. While a current ratio below 1 shows that the company is not in good financial health, it does not necessarily mean that it will go bankrupt. There are many ways for a company to access financing, and this is particularly so if a company has realistic expectations of future earnings against which it might borrow. For example, if a company has a reasonable amount of short-term debt but is expecting substantial returns from a project or other investment not too long after its debts are due, it will likely be able to stave off its debt. All the same, a current ratio below 1 is usually not a good sign.

On the other hand, a high ratio (over 3) does not necessarily indicate that a company is in a state of financial well-being either. Depending on how the company's assets are allocated, a high current ratio may suggest that that company is not using its current assets efficiently, is not securing financing well or is not managing its working capital well. To better assess whether or not these issues are present, a liquidity ratio more specific than the current ratio is needed.

An example: assume that Big-Sale Stores has \$2 billion in cash, \$1 billion in securities, \$4 billion in inventory, \$2 billion in accounts receivable and \$6 billion in liabilities. To calculate Big-Sale's current ratio, you would take the sum of its various assets and divide them by its liabilities, for a current ratio of 1.5  $((\$2B + \$1B + \$4B + \$2B) / \$6B = \$9B / \$6B = 1.5)$ . Big-Sale Stores, then, appears to have healthy financials.





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The current ratio can give a sense of the efficiency of a company's operating cycle or its ability to turn its product into cash. Companies that have trouble getting paid on their receivables or have long inventory turnover can run into liquidity problems because they are unable to alleviate their obligations.

## Limitations of 'Current Ratio'

No one ratio is a perfect gauge of a company's financial health or of whether or not investing in a company is a wise decision. As such, when using them it is important to understand their limitations, and the same holds true for the current ratio.

One limitation of using the current ratio emerges when using the ratio to compare different companies with one another. Because business operations can differ substantially between industries, comparing the current ratios of companies in different industries with one another will not necessarily lead to any productive insight. For example, while in one industry it may be common practice to take on a large amount of debt through leverage, another industry may strive to keep debts to a minimum and pay them off as soon as possible. Companies within these two industries, then, could potentially have very different current ratios, though this would not necessarily indicate that one is healthier than the other because of their differing business practices. As such, it is always more useful to compare companies within the same industry.

Another drawback of using current ratios, briefly mentioned above, involves its lack of specificity. Of all of the different liquidity ratios that exist, the current ratio is one of the least stringent. Unlike many other liquidity ratios, it incorporates *all* of a company's current assets, even those that cannot be easily liquidated. As such, a high current ratio cannot be used to effectively determine if a company is inefficiently deploying its assets, whereas certain other liquidity ratios can.

## 'Current Ratio' and Other Liquidity Ratios

Generally, liquidity ratios can be used to gauge a company's ability to pay off its debts. However, there are a variety of different liquidity ratios that exist and that measure this in different ways. When considering the current ratio, it is important to understand its relationship to other popular liquidity ratios.

One popular ratio is the working capital ratio, which is the same as the current ratio.



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Another class of liquidity ratios works in a similar way to the current ratio, but are more specific as to the kinds of assets they incorporate. The cash asset ratio (or cash ratio), for example, compares only a company's marketable securities and cash to its current liabilities. The acid-test ratio (or quick ratio) compares a company's easily liquidated assets (including cash, accounts receivable and short-term investments, excluding inventory and prepaids) to its current liabilities. The operating cash flow ratio compares a company's active cash flow from operations to its current liabilities. These liquidity ratios have a more specific purpose than the current ratio, that is, to gauge a company's ability to pay off short term debts.

Another similar liquidity ratio is the debt ratio, which is the opposite of the current ratio. Debt ratio calculations take current liabilities as the numerator and current assets as the denominator in an attempt to measure a company's leverage.

## Long Term Debt To Total Assets Ratio

The long term debt to total assets ratio is a measurement representing the percentage of a corporation's assets financed with loans or other financial obligations lasting more than one year. The ratio provides a general measure of the long-term financial position of a company, including its ability to meet financial requirements for outstanding loans.

A year-over-year decrease in long term debt to total assets ratio may suggest a company is progressively becoming less dependent on debt to grow its business. The calculation for the long-term debt to total assets ratio is:  $\text{long-term debt} / \text{total assets} = \text{long-term debt to total asset ratio}$ .

### Example of Long-Term Debt to Asset Ratio

For example, if a company has \$100,000 in total assets with \$40,000 in long-term debt, its long-term debt to total asset ratio is  $\$40,000 / \$100,000 = 0.4$  or 40%. This ratio indicates that the company has 40 cents of long-term debt for each dollar it has in assets. In order to compare the overall leverage position of the company, investors look at comparable firms and the historical changes in this ratio.

### What Does the Long-Term Debt to Asset Ratio Symbolize?

If a business has a high long-term debt to asset ratio, it suggests the business has a relatively high degree of risk, and eventually, it may not be able to repay its debts. This makes lenders more skeptical about loaning the business money and investors more leery about buying shares. In contrast, if a business has a low long-term debt to asset ratio, it can signify the relative strength of the business. However, the assertions an analyst can make based on this ratio vary based on the company's industry as well as other factors, and for this reason, analysts tend to compare these numbers between companies from the same industry.



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## **Difference Between Long-Term Debt to Asset and Total Debt to Asset Ratios**

While long-term debt to asset ratio only takes into account long-term debts, the total debt to total asset ratio includes all debts. This ratio takes into account both long-term debts, such as mortgages and securities, and current debts such as rent, utilities and short-term loans. Both ratios, however, take into account all of a business's assets including tangible assets such as equipment and inventory and intangible assets such as accounts receivables. Because the total debt to asset ratio includes more of a company's liabilities, this ratio is almost always higher than a company's long-term debt to asset ratio.

## **Debt/Equity Swap**

A debt/equity swap is a transaction in which the obligations or debts of a company or individual are exchanged for something of value, equity. In the case of a publicly traded company, this generally entails an exchange of bonds for stock. The value of the stocks and bonds being exchanged is typically determined by the market at the time of the swap.

A debt/equity swap is a refinancing deal in which a debt holder gets an equity position in exchange for cancellation of the debt. The swap is generally done to help a struggling company continue to operate. The logic behind this is an insolvent company cannot pay its debts or improve its equity standing. However, sometimes a company may simply wish to take advantage of favorable market conditions. Covenants in the bond indenture may prevent a swap from happening without consent.

### **Why Do Companies Use Debt/Equity Swaps?**

In some cases, a business may offer its debt holders equity because the business does not want to or cannot pay the face value of the bonds it has issued. To delay repayment, it offers stocks instead.

In other cases, businesses have to maintain certain debt/equity ratios, and inviting debt holders to swap their debts for equity in the company helps to adjust that balance. These debt/equity ratios are often part of financing requirements imposed by lenders. In still other cases, businesses use debt/equity swaps as part of their bankruptcy restructuring.

### **How Do Debt/Equity Swaps Work in Chapter 11 Bankruptcy?**

If a company decides to declare bankruptcy, it has a choice between Chapter 7 and Chapter 11. Under Chapter 7, all of the business' debts are eliminated, and the business no longer operates. Under Chapter 11, the business continues its operations while restructuring its finances. In many cases, Chapter 11 reorganization cancels the company's existing equity



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shares. It then reissues new shares to the debt holders, and the bondholders and creditors become the new shareholders in the company.

## **What Is the Difference Between Debt/Equity Swaps and Equity/Debt Swaps?**

An equity/debt swap is the opposite of a debt/equity swap. Instead of trading debt for equity, shareholders swap equity for debt. Essentially, they exchange stocks for bonds.

## **How Do Companies Entice Clients Into Debt/Equity Swaps?**

In cases of bankruptcy, the debt holder does not have a choice about whether he wants to make the debt/equity swap. However, in other cases, he may have a choice in the matter. To entice people into debt/equity swaps, businesses often offer advantageous trade ratios. For example, if the business offers a 1:1 swap ratio, the bondholder receives stocks worth exactly the same amount as his bonds, not a particularly advantageous trade. However, if the company offers a 1:2 ratio, the bondholder receives stocks valued at twice as much as his bonds, making the trade more enticing.

## **Liquidity Ratios**

Liquidity ratios measure a company's ability to pay debt obligations and its margin of safety through the calculation of metrics including the current ratio, quick ratio and operating cash flow ratio. Current liabilities are analyzed in relation to liquid assets to evaluate the coverage of short-term debts in an emergency. Bankruptcy analysts and mortgage originators use liquidity ratios to evaluate going concern issues, as liquidity measurement ratios indicate cash flow positioning.

Liquidity ratios are most useful when they are used in comparative form. This analysis may be performed internally or externally. For example, internal analysis regarding liquidity ratios involves utilizing multiple accounting periods that are reported using the same accounting methods. Comparing previous time periods to current operations allows analysts to track changes in the business. In general, a higher liquidity ratio indicates that a company is more liquid and has better coverage of outstanding debts.

Alternatively, external analysis involves comparing the liquidity ratios of one company to another company or entire industry. This information is useful to compare the company's strategic positioning in relation to its competitors when establishing benchmark goals. Liquidity ratio analysis may not be as effective when looking across industries, as various businesses require different financing structures. Liquidity ratio analysis is less effective for comparing businesses of different sizes in different geographical locations.



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## Solvency Versus Liquidity

Solvency relates to a company's overall ability to pay debt obligations and continue business operations, while liquidity focuses more on current financial accounts. A company must have more total assets than total liabilities to be considered solvent and more current assets than current liabilities to be considered liquid. Although solvency is not directly correlated to liquidity, liquidity ratios present a preliminary expectation regarding the solvency of a company.

## Examples of Liquidity Ratios

The most basic liquidity ratio or metric is the calculation of working capital. Working capital is the difference between current assets and current liabilities. If a business has a positive working capital, this indicates it has more current assets than current liabilities and in the event of an emergency, the business can pay all of its short-term debts. A negative working capital indicates that a company is illiquid.

The current ratio divides total current assets by total current liabilities. This ratio provides the most basic analysis regarding the coverage level of current debts by current assets. The quick ratio expands on the current ratio by only including cash, marketable securities and accounts receivable in the numerator. The quick ratio reflects the potential difficulty in selling inventory or prepaid assets in the result of an emergency.

## Operating Ratio

The operating ratio shows the efficiency of a company's management by comparing operating expense to net sales. The smaller the ratio, the greater the organization's ability to generate profit if revenues decrease. When using this ratio, however, investors should be aware that it doesn't take debt repayment or expansion into account.

$$= \frac{\text{Operating Expense}}{\text{Net Sales}}$$

Analysts have many ways of analyzing performance trends. One of the most popular, because it concentrates on core business activities, is the operating ratio. The operating ratio is viewed as a measure of operational efficiency. It is often used, along with return on assets and return on equity, to measure a company's efficient use of capital and managerial resources. Analysts also like to track the operating ratio over a period of time to identify trends in operational efficiency or inefficiency. An operating ratio that is going up is indicative of an inefficient operating environment that might need to implement cost controls for margin improvement.



# DEBT-DEFINITIONS

An operating ratio that is decreasing is indicative of an efficient operating environment in which operating expenses are increasingly a smaller percentage of sales.

## Operating Ratio Calculation

The operating ratio is calculated by dividing operating expenses by sales. Operating expenses are essentially all expenses except taxes and interest. Occasionally, a company has non-operating expenses as well, which are also deducted. All of these line items are listed on the income statement. Companies must clearly state which expenses are operational and which are designated for other uses.

## Operating Ratio Example

Assume company A has \$100,000 in sales; \$50,000 in total expenses, including \$3,000 in taxes; and \$7,000 in interest payments. In this scenario, the operating expense is calculated by deducting taxes and interest payments from total expenses. The result is \$50,000 minus \$7,000 minus \$3,000, for an amount of \$40,000. The operating ratio is therefore \$40,000 divided by \$100,000, or 40%. This means that 40% of company A's revenues are used for operating expenses. The total expense ratio is calculated as \$50,000 divided by \$100,000, or 50%. This also happens to be net income margin.

## Points of Consideration

It is important to compare the operating ratio with other firms in the same industry. If a company has a higher operating ratio than its peer average, it is a robust indication of inefficiency, and vice versa. That said, some companies have taken on a great deal of debt. More leverage translates into additional risk with higher interest payments, but this risk is not evident in the operating ratio. Two companies can have the same operating ratio with vastly different debt levels, so it is important to compare debt ratios before coming to any conclusions.