

HANDOUT
ANALYSIS FINANCIAL RATIO'S

COURSE : FINANCIAL STATEMENT ANALYSIS

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FINANCIAL STATEMENT RATIOS

LIQUIDITY			
Ratio	Definition	Formula	Analysis and Information
Current Ratio	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 total assets of a company (both liquid and illiquid) relative to that company's current total liabilities.	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	<p>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, and accounts receivable).</p> <p>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.</p> <p>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.</p>
Acid Test Ratio	The acid-test ratio is a strong indicator of whether a firm has sufficient short-term assets to cover its immediate liabilities. Commonly known as the quick ratio, this metric is more robust than the current ratio, also known as the working capital ratio, since it ignores illiquid assets such as inventory.	$\frac{(\text{Cash and cash equivalents} + \text{Marketable Securities} + \text{Account Receivables})}{\text{Current Liabilities}}$	<p>Companies with an acid-test ratio of less than 1 do not have the liquid assets to pay their current liabilities and should be treated with caution. If the acid-test ratio is much lower than the current ratio, it means that current assets are highly dependent on inventory.</p> <p>For most industries, the acid-test ratio should exceed 1. Then again, a very high ratio is not always an unalloyed good. It could indicate that cash has accumulated and is idle, rather than being reinvested, returned to shareholders or otherwise put to productive use. Some tech companies generate massive cash flows and accordingly have acid-test ratios as high as 7 or 8. While this is certainly better than the alternative, these companies have drawn criticism from activist investors who would prefer that shareholders receive a portion of the profits.</p>
Collection Period	The approximate amount of time that it takes for a business to receive payments owed in terms of accounts receivable. The average collection period is calculated by dividing the average balance of accounts receivable by total net credit sales for the	$\frac{\text{Average accounts receivable}}{\text{Sales}/360}$	The average collection period represents the average number of days between the date a credit sale is made and the date payment is received from the credit sale. The average balance of accounts receivable is calculated by adding the beginning balance in accounts receivable and ending balance in accounts receivable and dividing the total by 2. When calculating the average

	period and multiplying the quotient by the number of days in the period.		<p>collection period for an entire year, 360 may be used as the number of days in one year for simplicity.</p> <p>In general, a lower average collection period is more favorable than a higher average collection period. A low average collection period indicates that the organization is collecting payment faster. However, this may be an indication that its credit terms are too strict, and customers may seek suppliers or service providers with more lenient payment terms.</p> <p>A company should compare the average collection period to the credit terms extended to customers. For example, an average collection period of 25 days isn't as concerning if invoices are issued with a net 30 due date. However, an ongoing evaluation of the outstanding collection period directly affects the organization's cash flows.</p>
Day to Sell Inventory	The days sales of inventory value, or DSI, is a financial measure of a company's performance that gives investors an idea of how long it takes a company to turn its inventory (including goods that are a work in progress, if applicable) into sales. Generally, a lower (shorter) DSI is preferred, but it is important to note that the average DSI varies from one industry to another.	$\frac{\text{Average Inventory}}{\text{Cost of Sales} / 360}$	<p>Days sales of inventory, or days inventory, is one part of the cash conversion cycle, which represents the process of turning raw materials into cash. The days sales of inventory is the first stage in that process. The other two stages are days sales outstanding and days payable outstanding. The first measures how long it takes a company to receive payment on accounts receivable, while the second measures how long it takes a company to pay off its accounts payable.</p> <p>DSI is one measure of inventory effectiveness. By calculating the number of days that a company holds onto inventory before selling, the efficiency ratio measures the average length of time that a company's cash is tied up in inventory. The calculation gives further perspective to the overall inventory ratio by putting the figure into a daily context. The formula for DSI, equivalent to the average days to sell the inventory, is calculated as follows: $(\text{Inventory} / \text{Cost of Sales}) * 360$</p> <p>This metric taken on its own, however, lacks context. DSI tends to vary greatly between industries, depending on product type, business model, etc. Therefore, it is important to compare the value to that of other similar companies. For example, businesses that sell perishable or fast-moving products such as food items will have a lower DSI than those that sell non-perishable or slow-moving products such as cars or furniture.</p>

CAPITAL STRUCTURE AND SOLVENCY

Ratio	Definition	Formula	Analysis and Information
Total Debt to Equity	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	$\frac{\text{Total Liabilities}}{\text{Shareholder's Equity}}$	<p>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 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.</p> <p>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.</p> <p>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 particularly capital intensive and may often have a debt/equity ratio of under 0.5. As such, D/E ratios should only</p>

			be used to compare companies when those companies operate within the same industry.
Long-term Debt to Equity	<p>The long-term debt to capitalization ratio is a ratio showing the financial leverage of a firm.</p> <p>A variation of the traditional debt-to-equity ratio, this value computes the proportion of a company's long-term debt compared to its available capital. By using this ratio, investors can identify the amount of leverage utilized by a specific company and compare it to others to help analyze the company's risk exposure as generally, companies that finance a greater portion of their capital via debt are considered riskier than those with lower leverage ratios.</p>	$\frac{\text{Long Term Liabilities}}{\text{Shareholder's Equity}}$	<p>The choice between using long-term debt and other forms of capital, namely preferred and common stock or categorically called equity, is a balancing act to build a financing capital structure with lower cost and less risk. Long-term debt can be advantageous if a company anticipates strong growth and ample profitability that can help ensure on-time debt repayments. Lenders collect only their due interest and do not participate in profit sharing among equity holders, making debt financing sometimes a preferred funding source. On the other hand, long-term debt may be risky when a company already struggles with its business, and the financial strain imposed by the debt burden may well lead to insolvency.</p>
Times Interest Earn	<p>Times interest earned (TIE) is a metric used to measure a company's ability to meet its debt obligations. The formula is calculated by taking a company's earnings before interest and taxes (EBIT) and dividing it by the total interest payable on bonds and other contractual debt. TIE indicates how many times a company can cover its interest charges on a pretax earnings basis.</p>	$\frac{\text{Income Before Income Taxes and Interest Expense}}{\text{Interest Expense}}$	<p>Failing to meet these obligations could force a company into bankruptcy. TIE is also referred to as the interest coverage ratio. Generating cash flow to make principal and interest payments and avoiding bankruptcy depends on a company's ability to produce earnings. A company's capitalization refers to the amount of money it has raised by issuing stock or debt, and choices about capitalization impact the TIE ratio. Businesses consider the cost of capital for stock and debt, and they use that cost to make decisions about capitalization.</p> <p>Companies that generate consistent annual earnings are more likely to carry more debt as a percentage of total capitalization. If a lender sees history of generating consistent earnings, the firm is in a better position to make principal and interest payments on time. Utility companies, for example, provide a product that consumers use every month, and these firms generate consistent earnings. As a result, some utility companies may raise 60% or more of their capital from issuing debt.</p> <p>Startup firms and other businesses that have inconsistent earnings raise most or all of company capital using equity – that is, stock. Once a company can establish a track record of producing reliable earnings, it may raise capital through debt offerings and shift away from issuing common stock.</p>

RETURN ON INVESTMENT

Return on Assets	<p>Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".</p>	$\frac{\text{Net Income} + \text{Interest Expense} \times (1 - \text{tax rate})}{\text{Average Total Assets}}$	<p>ROA tells you what earnings were generated from invested capital (assets). ROA for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a company's previous ROA numbers or the ROA of a similar company.</p> <p>The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment. For example, if one company has a net income of \$1 million and total assets of \$5 million, its ROA is 20%; however, if another company earns the same amount but has total assets of \$10 million, it has an ROA of 10%. Based on this example, the first company is better at converting its investment into profit. When you really think about it, management's most important job is to make wise choices in allocating its resources. Anybody can make a profit by throwing a ton of money at a problem, but very few managers excel at making large profits with little investment.</p> <p>Things to Remember</p> <ul style="list-style-type: none"> •The ROA is often referred to as ROI •We add the interest expense to ignore the costs associated with funding those assets.
Return on Common Equity	<p>Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.</p> <p>Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares.</p>	$\frac{\text{Net Income}}{\text{Average Shareholder's Equity}}$ <p style="text-align: center;"><i>or</i></p> $\frac{\text{Net Income} - \text{Dividend Preferred Stock}}{[(\text{Shareholder's Equity Y1} - \text{Preferred Stock Y1}) + (\text{Shareholder's Equity Yn} - \text{Preferred Stock Yn})] / n}$	<p>The ROE is useful for comparing the profitability of a company to that of other firms in the same industry.</p> <p>There are several variations on the formula that investors may use:</p> <ol style="list-style-type: none"> 1. Investors wishing to see the return on common equity may modify the formula above by subtracting preferred dividends from net income and subtracting preferred equity from shareholders' equity, giving the following: return on common equity (ROCE) = net income - preferred dividends / common equity.

	Also known as "return on net worth" (RONW).		<p>2. Return on equity may also be calculated by dividing net income by average shareholders' equity. Average shareholders' equity is calculated by adding the shareholders' equity at the beginning of a period to the shareholders' equity at period's end and dividing the result by two.</p> <p>3. Investors may also calculate the change in ROE for a period by first using the shareholders' equity figure from the beginning of a period as a denominator to determine the beginning ROE. Then, the end-of-period shareholders' equity can be used as the denominator to determine the ending ROE. Calculating both beginning and ending ROEs allows an investor to determine the change in profitability over the period.</p> <p>Things to Remember</p> <ul style="list-style-type: none"> •If new shares are issued then use the weighted average of the number of shares throughout the year. •For high growth companies you should expect a higher ROE. •Averaging ROE over the past 5 to 10 years can give you a better idea of the historical growth.
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OPERATING PERFORMANCE

Gross Profit Margin	Gross profit margin is a financial metric used to assess a company's financial health and business model by revealing the proportion of money left over from revenues after accounting for the cost of goods sold (COGS). Gross profit margin, also known as gross margin, is calculated by dividing gross profit by revenues. Also known as "gross margin."	$\frac{\text{Sales} - \text{Cost of Sales}}{\text{Sales}}$	<p>There are several layers of profitability that analysts monitor to assess the performance of a company, including gross profit, operating profit and net income. Each level provides information about a company's profitability. Gross profit, the first level of profitability, tells analysts how good a company is at creating a product or providing a service compared to its competitors. Gross profit margin, calculated as gross profit divided by revenues, allows analysts to compare business models with a quantifiable metric.</p> <p>Gross Profit Margin</p> <p>Without an adequate gross margin, a company is unable to pay for its operating expenses. In general, a company's gross profit margin should be stable unless there have been changes to the company's business model. For example, when companies automate certain supply chain functions, the initial investment may be high; however, the cost of goods sold is much lower due to lower labor costs.</p>
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Operating Profit Margin (pretax)		$\frac{\text{Income from Operations}}{\text{Sales}}$	
Net profit Margin	<p>Net profit margin is the ratio of net profits to revenues for a company or business segment. Typically expressed as a percentage, net profit margins show how much of each dollar collected by a company as revenue translates into profit.</p>	$\frac{\text{Net Income}}{\text{Sales}}$	<p>Net margins vary from company to company, and certain ranges can be expected in certain industries, as similar business constraints exist in each distinct industry. Low profit margins don't necessarily equate to low profits. For example, Wal-Mart Stores Inc. has delivered high returns for its shareholders while operating on net margins less than 5% annually. In fact, in the first quarter of 2016, Walmart's profit margin was 2.66%. In</p>

			<p>contrast, a business with very small operating budget such as an independent contractor working as a freelance writer has a very small overhead and as a result, most of its revenue is tied to profits. However, although freelance writing may have a high profit margin, its annual profits may seem low when compared to a multinational corporation such as Walmart.</p> <p>Most publicly traded companies report their net margins both quarterly during earnings releases and in their annual reports. Companies that are able to expand their net margins over time are generally rewarded with share price growth, as share price growth leads directly to higher levels of profitability.</p> <p>Net profit margin is one of the most important indicators of a business's financial health. It can give a more accurate view of how profitable a business is than its cash flow, and by tracking increases and decreases in its net profit margin, a business can assess whether or not current practices are working. Additionally, because net profit margin is expressed as a percentage rather than a dollar amount, as net profit is, it makes it possible to compare the profitability of two or more businesses regardless of their differences in size. Finally, a business can use its net profit margin to forecast profits based on revenues.</p>
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ASSET UTILIZATION

Cash Turnover		$\frac{\text{Sales}}{\text{Average Cash and Equivalents}}$	
Account Receivable Turnover	<p>An accounting measure used to quantify a firm's effectiveness in extending credit and in collecting debts on that credit. The receivables turnover ratio is an activity ratio measuring how efficiently a firm uses its assets.</p> <p>Receivables turnover ratio can be calculated by dividing the net value of credit sales during a given period by the average accounts receivable during the same period. Average accounts receivable can be calculated by adding the value of accounts receivable at the beginning of the desired period to</p>	$\frac{\text{Sales}}{\text{Average Account Receivables}}$	<p>Receivable turnover ratio is also often called “accounts receivable turnover,” the “accounts receivable turnover ratio” or the “debtor’s turnover ratio.”</p> <p>In essence, the receivables turnover ratio indicates the efficiency with which a firm manages the credit it issues to customers and collects on that credit. Because accounts receivable are moneys owed on a credit agreement without interest, by maintaining accounts receivable firms are indirectly extending interest-free loans to their clients. As such, because of the time value of money principle, a firm loses more money the longer it takes to collect on its credit sales.</p>

	<p>their value at the end of the period and dividing the sum by two.</p> <p>The receivables turnover ratio is most often calculated on an annual basis, though this can be broken down to find quarterly or monthly accounts receivable turnover as well.</p>		<p>A high receivables turnover ratio can imply a variety of things about a company. It may suggest that a company operates on a cash basis, for example. It may also indicate that the company's collection of accounts receivable is efficient, and that the company has a high proportion of quality customers that pay off their debts quickly. A high ratio can also suggest that the company has a conservative policy regarding its extension of credit. This can often be a good thing, as this filters out customers who may be more likely to take a long time in paying their debts. On the other hand, a company's policy may be too conservative if it is too tight in extending credit, which can drive away potential customers and give business to competitors. In this case, a company may want to loosen policies to improve business, even though it may reduce its receivables turnover ratio.</p> <p>A low ratio, in a similar way, can also suggest a few things about a company, such as that the company may have poor collecting processes, a bad credit policy or none at all, or bad customers or customers with financial difficulty. Theoretically, a low ratio can also often mean that the company has a high amount of cash receivables for collection from its various debtors, should it improve its collection processes. Generally, however, a low ratio implies that the company should reassess its credit policies in order to ensure the timely collection of imparted credit that is not earning interest for the firm.</p> <p>Uses of 'Receivables Turnover Ratio'</p> <p>The receivables turnover ratio has several important functions other than simply assessing whether or not a company has issues collecting on credit. Though this offers important insight, it does not tell the whole story. For example, if one were to track a company's receivables turnover ratio over time, it would say much more about the company's history with issuing and collecting on credit than a single value can. By looking at the progression, one can determine if the company's receivables turnover ratio is trending in a certain direction or if there are certain recurring patterns. What is more, by tracking this ratio over time alongside earnings, one may be able to determine</p>
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			<p>whether a company's credit practices are helping or hurting the company's bottom line.</p> <p>While this ratio is useful for tracking a company's accounts receivable turnover history over time, it may also be used to compare the accounts receivable turnover of multiple companies. If two companies are in the same industry and one has a much lower receivables turnover ratio than the other, it may prove to be the safer investment.</p>
Inventory Turnover	<p>Inventory turnover is a ratio showing how many times a company's inventory is sold and replaced over a period of time. The days in the period can then be divided by the inventory turnover formula to calculate the days it takes to sell the inventory on hand. It is calculated as sales divided by average inventory.</p>	$\frac{\text{Cost of Sales}}{\text{Average Inventory}}$	<p>Inventory turnover measures how fast a company is selling inventory and is generally compared against industry averages. A low turnover implies weak sales and, therefore, excess inventory. A high ratio implies either strong sales and/or large discounts.</p> <p>The speed with which a company can sell inventory is a critical measure of business performance. It is also one component of the calculation for return on assets (ROA); the other component is profitability. The return a company makes on its assets is a function of how fast it sells inventory at a profit. As such, high turnover means nothing unless the company is making a profit on each sale.</p>
Working Capital Turnover	<p>Working capital turnover is a measurement comparing the depletion of working capital used to fund operations and purchase inventory, which is then converted into sales revenue for the company. The working capital turnover ratio is used to analyze the relationship between the money that funds operations and the sales generated from these operations.</p>	$\frac{\text{Sales}}{\text{Average Working Capital}}$	<p>The working capital turnover ratio measures how well a company is utilizing its working capital for supporting a given level of sales. Because working capital is current assets minus current liabilities, a high turnover ratio shows that management is being very efficient in using a company's short-term assets and liabilities for supporting sales. In contrast, a low ratio shows a business is investing in too many accounts receivable (AR) and inventory assets for supporting its sales. This may lead to an excessive amount of bad debts and obsolete inventory.</p> <p>Pros and Cons of High Working Capital Turnover</p> <p>A high working capital turnover ratio shows a company is running smoothly and has limited need for additional funding. Money is coming in and flowing out on a regular basis, giving the business flexibility to spend capital on expansion or inventory. A high ratio may also give the business a competitive edge over similar companies.</p>

			<p>However, an extremely high ratio, typically over 80%, may indicate a business does not have enough capital supporting its sales growth. Therefore, the company may become insolvent in the near future. The indicator is especially strong when the accounts payable (AP) component is very high, indicating that management cannot pay its bills as they come due. For example, gold mining and silver mining have average working capital turnover ratios of approximately 82%. Gold and silver mining requires ongoing capital investment for replacing, modernizing and expanding equipment and facilities, as well as finding new reserves. An excessively high turnover ratio may be discovered by comparing the ratio for a specific business to ratios reported by other companies in the industry.</p>
PPE Turnover	<p>Property, plant and equipment (PP&E) is a company asset that is vital to business operations but cannot be easily liquidated, and depending on the nature of a company's business, the total value of PP&E can range from very low to extremely high compared to total assets. International accounting standard 16 deals with the accounting treatment of PP&E. It is listed separately in most financial statements because it is treated differently in accounting statements, and improvements, replacements and betterments can pose accounting issues depending on how the costs are recorded.</p>	$\frac{\text{Sales}}{\text{Average PPE}}$	<p>PP&E is also called tangible fixed assets. These assets are physical, tangible assets and they are expected to generate economic benefits for a company for a period of longer than one year. Examples of PP&E include land, buildings and vehicles. Industries or businesses that require a large amount of fixed assets are described as capital intensive.</p> <p>Financial Statement Record</p> <p>PP&E is recorded in a company's financial statements in the balance sheet. The cost of PP&E considers the actual cost of purchasing and bringing the asset to its intended use. This cost is called the historical cost. For example, when purchasing a building for a company to run its retail operations, the historical cost could include the purchase price, transaction fees and any improvements made to the building to bring it to its destined use. The value of PP&E is adjusted routinely as fixed assets generally see a decline in value due to use and depreciation. Amortization is used to devalue these assets as they are used, but land is not amortized because it can increase in value. Instead, it is represented at current market value. The balance of the PP&E account is remeasured every reporting period, and, after accounting for historical cost and amortization, is called the book value. This figure is reported on the balance sheet.</p> <p>Significance</p>

			<p>While PP&E is generally meant to be held and used by the company in the course of its business, it is considered an asset because a company could sell its property, plant or equipment, either because it is no longer of use or if the company runs into financial difficulties. Of course, selling property, plant and equipment that is necessary to a company's course of business could be drastic and could signal that a company is in financial trouble. It is important to note, that whatever the reason a company has in selling some of its property, plant or equipment, it is unlikely that a company will make a profit on the sale of the asset.</p>
Total Asset Turnover	<p>Asset turnover ratio is the ratio of the value of a company's sales or revenues generated relative to the value of its assets. The Asset Turnover ratio can often be used as an indicator of the efficiency with which a company is deploying its assets in generating revenue.</p> <p>Generally speaking, the higher the asset turnover ratio, the better the company is performing, since higher ratios imply that the company is generating more revenue per dollar of assets. Yet, this ratio can vary widely from one industry to the next. As such, considering the asset turnover ratios of an energy company and a telecommunications company will not make for an accurate comparison. Comparisons are only meaningful when they are made for different companies within the same sector.</p>	$\frac{\text{Sales}}{\text{Average Total Assets}}$	<p>Asset turnover is typically calculated over an annual basis using either the fiscal or calendar year. The total assets number used in the denominator can be calculated by taking the average of assets held by a company at the beginning of the year and at the year's end.</p> <p>Using the Asset Turnover Ratio</p> <p>Consider the asset turnover ratio for Wal-Mart Stores Inc. (WMT). When the fiscal year ended on January 31, 2014, Wal-Mart had total revenues of \$476 billion. Wal-Mart's total assets were \$203 billion at the beginning of that fiscal year and \$205 billion at fiscal year-end, for an average of \$204 billion. Wal-Mart's asset turnover ratio was therefore 2.36 (\$476 billion / \$204 billion).</p> <p>In contrast, AT&T Inc. (T) had total revenues of \$132 billion when the fiscal year ended on December 31, 2014. Total assets at the beginning and end of the 2014 fiscal year were \$278 billion and \$293 billion respectively, for an average asset base of \$287 billion. AT&T's asset turnover ratio in 2014 was therefore 0.46 (\$132 billion / \$287 billion).</p> <p>Clearly, it would not make much sense to compare the asset turnover ratios for Wal-Mart and AT&T, since they operate in very different industries. But comparing the asset turnover ratios for AT&T and Verizon Communications Inc. (VZ), for instance, may provide a clearer picture of asset use efficiency for these telecom companies. In the same fiscal year as in the AT&T example above, Verizon had total revenues of \$127</p>

			<p>billion. Total assets at the beginning and end of the year were \$274 billion and \$232 billion, respectively, for an average asset base of \$253 billion. As such, in 2014 Verizon's asset turnover ratio was 0.50 (\$127 billion / \$253 billion), about 9% higher than AT&T's in the same year.</p> <p>Yet, this kind of comparison does not necessarily paint the clearest possible picture. It is possible that a company's asset turnover ratio in any single year differs substantially from previous or subsequent years. For example, while AT&T's asset turnover ratio was 0.30 in 2006, it rose nearly a full fifty percent to reach 0.44 in 2007, the following year. For any specific company, then, one would do well to review the trend in the asset turnover ratio over a period of time to check whether asset usage is improving or deteriorating.</p> <p>Many other factors can affect a company's asset turnover ratio in a given year, such as whether or not an industry is cyclical.</p> <p>History</p> <p>The Asset Turnover ratio is a key component of DuPont analysis, a system that the DuPont Corporation began using during the 1920s. DuPont analysis breaks down Return on Equity (ROE) into three parts, one of which is asset turnover, the other two being profit margin and financial leverage. In splitting ROE into distinct components, this form of analysis allows one to analyze the nuances of a high or low ROE, to attempt to determine what causes may be contributing to a company's ROE performance and to compare the components of ROE with those of other companies.</p>
MARKET MEASURES			
Price to Earning	<p>P/E is short for the ratio of a company's share price to its per-share earnings. As the name implies, to calculate the P/E.</p> <p>The price-earnings ratio (P/E Ratio) is the ratio for valuing a company that measures its current share price relative to its per-share earnings.</p> <p>EPS is most often derived from the last four quarters. This form of the price-earnings ratio is called trailing P/E, which may be calculated by</p>	$\frac{\text{Market Price per Share}}{\text{Earnings per Share}}$	<p>In essence, the price-earnings ratio indicates the dollar amount an investor can expect to invest in a company in order to receive one dollar of that company's earnings. This is why the P/E is sometimes referred to as the multiple because it shows how much investors are willing to pay per dollar of earnings. If a company were currently trading at a multiple (P/E) of 20, the interpretation is that an investor is willing to pay \$20 for \$1 of current earnings.</p>

subtracting a company's share value at the beginning of the 12-month period from its value at the period's end, adjusting for stock splits if there have been any. Sometimes, price-earnings can also be taken from analysts' estimates of earnings expected during the next four quarters. This form of price-earnings is also called projected or forward P/E. A third, less common variation uses the sum of the last two actual quarters and the estimates of the next two quarters.

The price-earnings ratio is also sometimes known as the price multiple or the earnings multiple.

In general, a high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E. A low P/E can indicate either that a company may currently be undervalued or that the company is doing exceptionally well relative to its past trends. When a company has no earnings or is posting losses, in both cases P/E will be expressed as "N/A." Though it is possible to calculate a negative P/E, this is not the common convention.

The price-earnings ratio can also be seen as a means of standardizing the value of one dollar of earnings throughout the stock market. In theory, by taking the median of P/E ratios over a period of several years, one could formulate something of a standardized P/E ratio, which could then be seen as a benchmark and used to indicate whether or not a stock is worth buying.

An individual company's P/E ratio is much more meaningful when taken alongside P/E ratios of other companies within the same sector. For example, an energy company may have a high P/E ratio, but this may reflect a trend within the sector rather than one merely within the individual company. An individual company's high P/E ratio, for example, would be less cause for concern when the entire sector has high P/E ratios.

Moreover, because a company's debt can affect both the prices of shares and the company's earnings, leverage can skew P/E ratios as well. For example, suppose there are two similar companies that differ primarily in the amount of debt they take on. The one with more debt will likely have a lower P/E value than the one with less debt. However, if business is good, the one with more debt stands to see higher earnings because of the risks it has taken.

Another important limitation of price-earnings ratios is one that lies within the formula for calculating P/E itself. Accurate and unbiased presentations of P/E ratios rely on accurate inputs of the market value of shares and of accurate earnings per share estimates. While the market determines the value of shares and, as such, that information is available from a wide variety of reliable sources, this is less so for earnings, which are often

			<p>reported by companies themselves and thus are more easily manipulated. Since earnings are an important input in calculating P/E, adjusting them can affect P/E as well. (See also, How can the P/E ratio mislead investors?)</p> <p>Things to Remember</p> <ul style="list-style-type: none"> •Generally a high P/E ratio means that investors are anticipating higher growth in the future. •The average market P/E ratio is 20-25 times earnings. •The P/E ratio can use estimated earnings to get the forward looking P/E ratio. •Companies that are losing money do not have a P/E ratio. •You can expand your financial vocabulary by subscribing to our Term of the Day newsletter.
Earnings Yield	<p>A financial ratio that indicates how much a company pays out in dividends each year relative to its share price. Dividend yield is represented as a percentage and can be calculated by dividing the dollar value of dividends paid in a given year per share of stock held by the dollar value of one share of stock.</p> <p>Yields for a current year are often estimated using the previous year's dividend yield or by taking the latest quarterly yield, multiplying by 4 (adjusting for seasonality) and dividing by the current share price.</p>	$\frac{\text{Earnings per Share}}{\text{Market Price per Share}}$	<p>Dividend yield is a way to measure how much cash flow you are getting for each dollar invested in an equity position. In other words, it measures how much "bang for your buck" you are getting from dividends. In the absence of any capital gains, the dividend yield is effectively the return on investment for a stock.</p> <p>To better explain the concept, refer to the following dividend yield example. Suppose company ABC's stock is trading at \$20 and pays annual dividends of \$1 per share to its shareholders. Also suppose that company XYZ's stock is trading at \$40 and also pays annual dividends of \$1 per share. This means that company ABC's dividend yield is 5% ($1 / 20 = 0.05$), while XYZ's dividend yield is only 2.5% ($1 / 40 = 0.025$). Assuming all other factors are equivalent, then, an investor looking to use his or her portfolio to supplement his or her income would likely prefer ABC's stock over that of XYZ, as it has double the dividend yield.</p> <p>Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields. Yet, high dividends may often come at the cost of growth potential. Every dollar a company is paying in dividends to its shareholders is a dollar that company is not reinvesting in itself in an effort to make capital gains. While being paid for holding</p>

			a stock is attractive to many, and for good reason, shareholders can earn high returns if the value of their stock increases while they hold it. In other words, when companies pay high dividends it may come at a cost.
Dividend Yield		$\frac{\text{Cash Dividend per Share}}{\text{Market Price per Share}}$	
Dividend Payout Rate	The dividend payout ratio is the percentage of earnings paid to shareholders in dividends.	$\frac{\text{Cash Dividend per Share}}{\text{Earnings per Share}}$	<p>The dividend payout ratio provides an indication of how much money a company is returning to shareholders, versus how much money it is keeping on hand to reinvest in growth, pay off debt or add to cash reserves. This latter portion is known as retained earnings.</p> <p>How to Interpret the Ratio</p> <p>A number of considerations go into interpreting the dividend payout ratio, most importantly the company's level of maturity. A new, growth-oriented company that aims to expand, develop new products and move into new markets would be expected to reinvest most or all of its earnings and could be forgiven for having a low or even zero payout ratio.</p> <p>On the other hand, an older, established company that returns a pittance to shareholders would test investors' patience and could tempt activists to intervene. Apple (AAPL) began to pay a dividend for the first time in nearly twenty years in 2012, when the new CEO felt the company's enormous cash flow made a 0% payout ratio difficult to justify. Because it implies that a company has moved past its initial growth stage, a high payout ratio means share prices are unlikely to appreciate rapidly.</p> <p>The payout ratio is also useful for assessing a dividend's sustainability. Companies are extremely reluctant to cut dividends, since it can drive the stock price down and reflect poorly on the management's abilities. If a company's payout ratio is over 100%, it is returning more money to shareholders than it is earning and will probably be forced to lower the dividend or stop paying it altogether. That result is not inevitable, however. A company can weather a bad year without suspending payouts, and it is often in their interest to do so. It is therefore important to consider future earnings expectations and</p>

			<p>calculate a forward-looking payout ratio to contextualize the backward-looking one.</p> <p>Long-term trends in the payout ratio also matter. A steadily rising ratio could indicate a healthy, maturing business, but a spiking one could mean the dividend is heading into unsustainable territory.</p> <p>Dividends Are Industry Specific</p> <p>Dividend payouts vary widely by industry, and like most ratios, they are most useful to compare within a given industry. REITs, for example, are legally obligated to distribute at least 90% of earnings to shareholders, as they enjoy special tax exemptions. MLPs tend to have high payout ratios as well.</p> <p>Dividends are not the only way companies can return value to shareholders, so the payout ratio does not always provide a complete picture. The augmented payout ratio incorporates share buybacks into the metric; it is calculated by adding dividends and buybacks and dividing the sum by net income for the same period. If the result is too high, it can indicate an emphasis on short-term boosts to share prices at the expense of reinvestment and long-term growth.</p>
Price to Book	<p>The price-to-book ratio (P/B Ratio) is a ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share.</p> <p>Also known as the "price-equity ratio".</p> <p>A lower P/B ratio could mean that the stock is undervalued. However, it could also mean that something is fundamentally wrong with the company. As with most ratios, be aware that this varies by industry.</p> <p>This ratio also gives some idea of whether you're paying too much for what would be left if the company went bankrupt immediately.</p>	$\frac{\text{Market Price per Share}}{\text{Book Value per Share}}$	<p>The P/B ratio reflects the value that market participants attach to a company's equity relative to its book value of equity. A stock's market value is a forward-looking metric that reflects a company's future cash flows. The book value of equity is an accounting measure that is based on the historic cost principle, and reflects past issuances of equity, augmented by any profits or losses, and reduced by dividends and share buybacks.</p> <p>Advantages and Disadvantages to the P/B Ratio</p> <p>Investors find the P/B ratio useful because the book value of equity provides a relatively stable and intuitive metric that can be easily compared to the market price. Also, the P/B ratio can be used for firms with positive book values and negative earnings since negative earnings render price-to-earnings ratios useless, and there are fewer companies with negative book values than companies with negative earnings. However, when accounting standards applied by firms vary, P/B ratios may not be comparable, especially for companies from different</p>

			countries. Also, P/B ratios can be less useful for services and information technology companies with little tangible assets on their balance sheets. Finally, the book value can become negative as a result of a long series of negative earnings, making the P/B ratio useless for relative valuation purposes.
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