

Fundamental Analysis

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The three factors that move stocks are:

- ✓ **Market risk:** Movements of the broad economy have a large sway on how individual stocks perform.
- ✓ **Size:** Shares of smaller companies measured by market value tend to beat the stock market, in part, because they are riskier and less established. Market value, also called market capitalization or market cap, measures the total price Wall Street assigns to a company by multiplying a stock price by the total number of its shares outstanding.
- ✓ **Price or value:** The lower a stock's price, relative to its book value, the better it tends to do relative to the rest of the stock market. Book value is a key aspect of fundamental analysis

per-share price of a stock, by itself, doesn't tell you much.

Market value = share price × number of shares outstanding

Even some private companies, which haven't sold stock, must provide some financial information if they have \$10 million or more in assets and have 500 or more owners.

Since most companies are on a calendar year, the results generally start trickling out two weeks after the quarter ends. Four times a year, usually in January, April, July, and October, thousands of companies report their financial results en masse. These times of year are called **earnings season**.

Not all companies follow a calendar year. For instance, retailers generally bring in a vast majority of their sales each year during December. For that reason, many retailers close their books at the end of January, to give them time to tally up their performance in December and give a full report for the year. When a company ends its year, for accounting purposes in a month other than December, it's called a **fiscal** year.

When companies issue an earnings press release, they will often notify the regulators by filing a form 8-K. The **8-K** filing is the official way to signal to the world that the company has released critical information.

Following the earnings press release, the next document to trickle from the company is the **10-Q**. The 10-Q is the official financial report submitted by a company to summarize its performance during the quarter.

Most companies have 40 days from the end of each fiscal quarter to produce and provide the 10-Q to investors. **Generally, companies file the 10-Q a week or two after they provide the earnings press release.**

A company's 10-Q is not officially audited by a third-party accounting firm.

Most companies are required to release their **10-K** filings within 75 days from the end of their fiscal year. Some smaller companies, though, have 90 days to comply with the rules.

The 10-K is kind of like a company's annual review. The level of detail of the 10-K is exhaustive, and unless you know what you're looking for, it's easy to get lost in the hundreds of pages of tables and text.

When reviewing a 10-K, always read the auditor's opinion. The statement from the auditor can be telling. While an auditor may not wave a red flag and tell you not to buy stock, you can read between the lines. For instance, if you see the word **qualified**, watch out. **That means the auditor has some issues with the way the books are kept, so you should too.**

Also, be careful when an auditor says a company may not be able to remain a **going concern**. That's accounting talk for, "**This company might not make it.**"

The **proxy statement** is a document the SEC requires companies to distribute to shareholders ahead of the annual shareholder meeting. It's kind of like the absentee ballot you might get prior to a presidential election.

When you're studying financial statements, just remember there are three primary functions of business you're trying to analyze: operating activities, investing activities, and financing activities.

Generally speaking, companies can finance, or fund their operations, in two ways.

They can either **rustle up investors, or they can borrow money.**

Investors provide money, called **equity capital**, to companies in exchange for a piece of the company. If all goes well, the company operates extremely well, profits soar, and investors are very happy since their share of the company will be worth more. When you buy stock in a company, you are an investor.

Some beginning investors incorrectly think money they use when buying a stock goes directly to the company. That's not usually the case. Companies sell their stock to the public once, in a process called an **initial public offering, or IPO**. When those shares sell for that first time, the companies get that money. But after the IPO, the company doesn't get additional cash. The shares and money are trading hands between other investors in the secondary market.

When it comes to financing itself, a company may also look to borrow money. Companies may borrow money from a local bank or sell IOUs, called **bonds**, to the public. Investors who lend money to a company just want to get their money back, plus an amount of interest agreed upon ahead of time.

If a company fails, investors and lenders are treated very differently. And the difference has a big influence on whether or not you decide to buy a company's stock or bond.

If a company is unable to keep paying interest to its lenders, the company goes into default. Typically, at that point, the bondholders take control of the company. In the worst-case scenario, **when a company cannot be saved, bondholders get repaid first**. So, let's say a company defaulted and had a giant garage sale to sell its desks and chairs. The money would be used to pay back debt holders before stock investors see a penny. That means, **as stock investors, you're accepting the possibility that you can lose your entire investment.**

When you're scrolling down through the list of forms, you might notice that some have a blue button that says "Voluntary Interactive Data." These forms are presented in a special format that computers can read, called **eXtensive Business Reporting Language or XBRL**. Financial statements available in XBRL can be easily processed and downloaded.

Most of the major Web portals, such as Yahoo, at finance.yahoo.com, and MSN, at money.msn.com, provide summaries of companies' primary financial statements. MSN Money also lets you access all the regulatory forms. As a fundamental analyst, it's important to know how to get the data direct from the source: **The SEC's IDEA database**.

If the company you're analyzing provides XBRL data, it's easy to download into a spreadsheet.

1. Open the filing. Find the filing you're interested in downloading using the steps above. Copy the Web address from the address bar in your browser by highlighting the address and holding the Control button and the C key.
2. Open Microsoft Excel.
3. Instruct Excel to find the filing. Choose Excel's "Data" pull-down menu, and then select Import External Data and then New Web Query.
4. Provide the Web address of the filing. Paste the filing's address by holding down the Control button and choose the V key, in the address bar at the top.
5. Import the filing. Click the Import button at the bottom of the page.
6. Select the relevant financial data. Scroll down until you see the financial data you would like to download. Click the small yellow arrow next to the data.

After you follow these steps, the financial information you want, such as the company's income statement or balance sheet, will automatically appear in a spreadsheet.

Dividends are periodic cash payments some companies make to their shareholders. The dividends are paid out of the company's cash as a way of returning profits to the shareholders. Dividends are a very important piece of your total return on an investment.

The best way to look up a dividend history is on the company's Web site. Going back to the GE example, go to www.ge.com and click on the investor relations link at the top of the page. Next, click on the Stock Information link on the left-hand side. You'll see a link for Dividend History, which listed GE's dividend payments going back for nearly a decade.

When a company's stock price rises dramatically and begins to approach \$50 a share or more, the executives might decide to split the shares. The theory goes that some naïve investors, who read too much into a stock's per-share price, might assume a stock trading for \$50 or more is too expensive.

In a stock split, the company cuts its share price, say in half, by cutting the shares into multiple shares. For instance, let's say you own 100 shares in a stock trading for \$60 a share. If the company has a 2-for-1 split, you will suddenly have 200 shares, but they'll be worth \$30 apiece. Management feels some investors are more likely to buy stock in a company for \$30 a share than \$60.

Some investors assume that a stock split is a major boon since they suddenly have more shares. But, as discussed, the per-share price of a stock doesn't tell you much. The value of your shares is still \$6,000, whether you own 100 shares at \$60 or 200 shares at \$30 a share. The company's market value also stays the same.

Fortunately, many companies provide stock-split histories on their Web sites. For instance, if you follow the instructions above to get GE's dividends, you'll notice stock splits are listed on the same page.

MSN Money also helps you look up if, and when, a company split its shares. Here's how:

1. Log into www.live.com.

For GE, for instance, enter quote:GE and click the green icon that looks like a magnifying glass.

3. Click on the small stock chart that appears in the search results.

This will take you to MSN's Charting feature.

4. Click on the Download MSN Money Investment Toolbox link that appears in the chart.

This will download a small piece of software that will let you get advanced charts. You only need to follow this step once.

5. Observe the chart.

If the stock has been split, you'll see a small box that's half white and half red. For instance, the chart tells you that GE last split its stock, by 3 for 1, on May 8, 2000.

The income statement spells out in gory detail how the company did during each quarter and year.

The basic structure of an income statement includes these items:

✓ **Revenue:** This is how much money the company brought in by selling goods and services. Revenue is often called the "top line."

✓ **Cost of goods sold:** It takes money to make money. Cost of goods measures what a company must spend to actually create the good or service sold. These are *direct costs*, meaning they are costs for items that may literally go into the products. Cost of goods sold, for many manufacturing companies, is the largest single cost of doing business. For instance, with an automaker, the cost of goods sold might include the cost of steel used to build the cars.

✓ **Operating expenses:** *Indirect expenses* are incurred by companies as they conduct business, but may not go directly into the product. These costs are usually necessary or important, but peripheral. These indirect costs are called *operating expenses* or better known as *overhead*. Operating expenses may include:

- **Marketing expenses:** Include advertising and other promotional expenses.

- **Research and development:** What a company spends to cook up new products or services to sell to customers.

- **Administrative expenses:** Expenses connected with support staff, such as legal, human resources, and other functions that are directly tied to manufacturing the product.

- ✓ **Other income:** Companies sometimes bring in money for things other than selling products and services. This income is recorded as other income. For instance, a company might win a legal settlement or sell a factory.
- ✓ **Other expenses.** Similarly to how other income doesn't qualify as revenue, other expenses do not qualify as normal operating expenses. Other expenses might include the cost to restructure a unit of the company, paying severance to lay off employees, or depreciation — accounting for wear and tear (see the sidebar, "Appreciating depreciation").
- ✓ **Earnings before interest and taxes.** After you subtract cost of goods sold, operating expenses, and other expenses from revenue, what you're left with is earnings before interest and taxes.
- ✓ **Interest expense.** Most companies borrow money to fund their operations or to buy inventory. Here, the company discloses how much it's paying to borrow money.
- ✓ **Taxes.** Companies must pay taxes too. Here, companies disclose how much they paid to Uncle Sam.
- ✓ **Net income.** Finally, after paying all these costs and expenses, what's left is the profit, or net income. This is how much the company earned during the period, based on accounting rules or GAAP.

GAAP — Generally Accepted Accounting Principles — painstakingly detailed rules that instruct companies on the right way to report results.

Revenue is a critical item because it tells you how:

- ✓ **Rapidly the company is growing (or shrinking):** Comparing revenue generated during a year or quarter with revenue reported in the same period a year ago can be very telling. This simple comparison tells you whether the company's growth is on an uptrend or downtrend.
- ✓ **Strong demand is for a company's products:** Companies love to brag about how popular their products are. But revenue is where hype can be quantified. Strong demand for a product will show up in the revenue line, even if the company's expenses are out of line and still losing money.
- ✓ **A company ranks in sheer size next to its rivals:** While there are many ways to measure a company's size, such as number of employees, revenue is as good a benchmark as any other. If you want to find out which company is the biggest in a competitive field, you should always check out revenue first.

Finding out how rapidly a company is growing is simple if you know your way around the income statement. Here's what you need to know:

1. Download the historical revenue data.
2. Pull out the revenue line item for several years. Pull out total revenue from the income statement and place it in a spreadsheet or write it down so you can do further analysis.
3. Calculate the year-to-year percentage change.
4. Repeat step 3 for each year so you can see a multiyear trend.

Understanding just how uneven revenue growth can be from year to year, is critical to the work of fundamental analysis because you can see if a firm is cyclical. A **cyclical** company is one that experiences large swings in revenue based on the health of the overall economy. As an investor, you might not be willing to pay as much for shares of a cyclical company if the economy is about to enter into a period of slower growth.

One of the best tricks used in fundamental analysis is **common-sizing**. *Common-sizing is simply taking lines on financial statements and quantifying their size by comparing them to a total.* When common-sizing is applied to the income statement, you compare each expense to revenue. That way, you can easily see whether the company's expenses are growing at an alarming pace compared with the growth of the business.

When you common-size an income statement, it's often best to use several years of data so you can see the trends from year to year. If a company's research and development budget is soaring, for instance, you'll spot the trend. Often an unusual blip on the common-sizing will clue you into something worth looking further into.

Next, measure the growth of costs and expenses in the same way as measuring the growth in revenue above.

After paying all the bills, including all the direct costs, operating expenses and taxes, what's left is the company's net profit.

Revenue – cost of goods sold – operating expenses + other income – other expenses – interest expense – taxes = Net Income

If you notice that a company's net income is growing more slowly than revenue, that's a quick tip-off that its expenses might be running amuck.

An efficient way to see how net income is faring next to revenue is to calculate the year-over-year percentage changes for revenue and for net income. By placing the growth of revenue and net income side-by-side, you'll see, very quickly, how well the company is controlling costs as demand for its products rises and falls.

One of the best ways to size up a company's profit is by studying **profit margins**. At its most basic level, a profit margin is how much a company has left after paying for its expenses.

There are three main types of profit margins fundamental analysts should be aware of, including:

Gross profit margin :

Gross profit is what's left of revenue after subtracting direct costs, also known as cost of goods sold. Gross margin measures how much the company makes after paying costs directly connected with producing the product.

The *gross profit margin* takes things a bit further by comparing gross profit with a company's revenue. In other words, the gross profit margin tells you **how much of revenue is kept, after paying direct costs, relative to sales**.

In the Standard & Poor's 500 index, the average gross margin is about 45.1

Gross profit margin is not as useful when studying software and Internet companies. A vast majority of the cost of producing software is overhead, and not direct costs

Operating profit margin :

Operating profit is what's left of revenue after subtracting overhead costs.

The operating profit margin is calculated by dividing operating profit by revenue. It tells you how much the company keeps of revenue after paying direct costs and overhead. Operating profit margins are critical indicators for fundamental analysis, since they give a good idea of how profitable a firm is with respect to its core business.

The operating margin includes the costs of research and development and advertising, for instance, which are important to generating successful software products..

Average 18% operating profit margin of companies in the Standard & Poor's 500.

Some fundamental analysts take issue with operating profit, because it includes some expenses that are not actual costs. For instance, operating profit subtracts depreciation from revenue, even though depreciation isn't an actual bill the company must pay

Net profit margin :

A company's **net profit or net income** is the most comprehensive measure of profitability. **Net profit tells you how many dollars the company kept after paying all its costs and expenses.** The net profit margin, which is net profit divided by total revenue, tells you how much of every dollar in sales the company keeps after paying all costs and expenses.

Companies can lose money, too. When that happens, it's called a *net loss*.

Net profit is operating profit minus everything else.

Earnings Per Share

Earnings per share, most commonly known as EPS. If net income tells you how large a pie is, EPS tells you, the fundamental analyst, how big your slice is.

EPS is calculated by dividing net income by the number of shares outstanding at the company. A company's number of shares outstanding is the total number of shares that are owned by members of the public as well as restricted shares held by officers and directors of the company. Restricted stock shares are given to individuals with close connections to the company, such as the executive team of a company that was acquired. Restricted stock comes with strings attached, which may bar the owners from selling for a certain amount of time.

Everything you really need to know, though, is right on the **income statement**, including:

✓ **Basic earnings per share:** This measure tells you how much of a slice of the company's net profit you're entitled to as a shareholder. The formula in its simplest form is:

Net income / number of shares outstanding

Some companies have special classes of stock, called preferred stock. These dividends, if paid, should be subtracted from net income in the formula above when calculating basic earnings per share.

✓ **Diluted earnings per share:** When you read in the newspaper about how much a company earned, you're most likely reading about diluted earnings per share. Diluted EPS measures how much the company earned based on each share of stock. Diluted EPS is commonly used because it's the most conservative. **It divides net income by the total number of shares that could possibly be outstanding, including the impact of employees converting their stock options into real shares.**

Never underestimate the danger of employee stock options on the value of your claim to a company's earnings. When employees are given options, and those options become valuable either because the employee works at the company for a set period of time or the stock rises, those shares can be converted into real shares. The avalanche of shares can water down, or dilute, how much of a claim you have on the company's earnings. This is called **dilution**, and is a big reason why you need to carefully compare basic EPS with diluted EPS. **If diluted EPS is dramatically less than basic EPS, that's a signal employees might be holding large baskets of options.**

profits and earnings don't always move in lockstep with stock prices.

It's true that over time, a company with rising revenue and earnings will likely see its stock price rise, too. Correctly forecasting how to determine how much a company will earn and how much it will be worth in the future can be great for long-term success. Fundamental analysts can help you determine whether a stock is cheap or expensive relative to the company's revenue and earnings. In the short term, stocks rise and fall largely based on how a company's earnings compare with what's expected.

These earnings estimates are usually based on diluted earnings per share.

These estimates are available online at many places, but below are instructions on how to find them at MSN Money.

1. Log into MSN Money at moneycentral.msn.com/investor.
2. Enter the symbol of the stock you're interested in the box in the upper left-hand corner of the screen and click the "Get Quote" button.
3. Click on the "Earnings Estimates" option listed in the navigation bar on the left-hand side of the screen.
4. Find the earnings number in the "Average Estimate" row under the quarter you're interested in. That's the earnings estimate.

Once the company reports its earnings, you can then compare the actual earnings with the estimate.

While analysts will usually forecast operating earnings, companies may sometimes include unusual and nonrecurring items that make comparison with the estimate problematic. For that reason, many companies attempt to help investors by offering *pro forma earnings*. Pro forma earnings don't follow GAAP. Instead, adjustments are made by the company to make the reported EPS match the estimate.

Pro forma earnings can be helpful when you're trying to see if a company's earnings beat, matched or missed earnings estimates. But pro forma earnings can also be abused by companies. By not following GAAP, companies have great leeway in adding certain one-time gains and ignoring charges they'd rather you not see.

The **balance sheet** is a financial statement that tells you if a company is financially healthy. A strong balance sheet, or one that's rich in cash and low on debt, can help a company endure a severe but temporary downturn in its business.

Accountants attempt to put everything companies own and owe into three buckets. Those buckets are:

✓ **Assets:** Things a company owns. These might include tangible assets, such as physical manufacturing plants or raw materials sitting in a warehouse. Assets, too, might be intangible. *Intangible assets are things like patents and trademarks, which have value even though you can't touch them.*

✓ **Liabilities:** Things a company owes. Usually, liabilities include debt the company is on the hook for.

✓ **Shareholders' equity (or just equity):** What's left of a company's assets after accounting for its liabilities. Technically, equity represents all the money put into the company by investors and the portion of the profits the company has held onto. *When companies hold onto earnings, rather than returning them to shareholders (often in the form a dividend), they are called retained earnings.* It's the equivalent to your own net worth.

Net worth is more of a term used in personal finance. Instead, ***the difference between what companies own and what they owe is called shareholders' equity.***

Assets = Liabilities + Equity

A company funds itself and keeps paying the bills by managing its ready-and-available cash, called **working capital**.

The portion of the balance sheet that records a company's assets typically has the following parts:

✓ **Current assets:** A company's current assets are *things it owns that could theoretically be sold for cash within a year.* These assets, also called **short-term assets**, are those the company can tap reasonable quickly to meet immediate cash obligations. Current assets can be further broken down into:

- **Cash**
- **Cash equivalents:** Companies will sometimes invest cash that's stockpiled in short-term and high-quality investments that can be quickly sold. These investments give companies liquidity, or access to cash, but allow them to earn a slightly higher return than just holding cash.
- **Marketable securities:** Sometimes companies have cash available that they don't need immediately, but expect they might need within a year. They might invest this cash in high-quality debt that matures in a quarter or two. These investments are relatively safe, but not as readily accessible as actual cash or cash equivalents.
- **Accounts receivable:** When companies sell a product, they often don't collect the cash right away. If you buy a book, for instance, you might use your credit card and the merchant isn't paid immediately. These short-term IOUs are called accounts receivable.
- **Inventories:** Companies must spend money to accumulate the things they plan to sell. Nearly a manufacturing companies, for instance, must buy raw materials to make their products. The value of these assets show up in the inventories line.
- **Prepaid expenses:** If a company pays a bill ahead of time, it has a credit with the supplier or merchant. That credit is an asset

✓ Long-term assets :

- **Property, plant and equipment (PP&E).** Assets that cannot be turned into cash in a year are called long-term assets. These assets include buildings and other machinery and computers a company might own.
- **Goodwill.** Goodwill is an asset you can't feel or touch, making it intangible. Goodwill usually appears on a company's balance sheet after it buys another company. *Goodwill is the amount paid for another company, above that company's actual value according to accounting rules.* The extra amount paid is considered an asset on the acquiring company's balance sheet.
- **Other intangibles.** Patents, brands and trademarks
- **Total assets.** All of the assets are added up to create a grand total of everything the company owns.

The liabilities section of a balance sheet breaks down everything companies owe into these parts:

✓ Current liabilities: *If a company has bills that are due within a year's time, they're considered to be current liabilities.* Current liabilities come in several flavors fundamental analysts need to be aware of :

- **Accounts payable:** Companies don't typically have to pay right away for things they buy. Suppliers will usually extend trade credit to companies, giving them at least 30 days or even longer to pay for certain supplies, raw materials or services.
- **Short-term debt:** This is the amount of debt the company must pay back within a year.
- **Current portion of long-term debt:** Typically companies arrange to borrow money for many years. A portion of that long-term debt, though, is generally due within a year and is called the current portion of long-term debt.
- **Other current liabilities.** Here's the catch-all bucket for liabilities that don't quite fit anywhere else.

✓ Long-term liabilities:

- **Long-term debt:** The costs of starting and maintaining a business can be massive. As a result, some companies turn to lenders to borrow money from, and if they're lucky, they can line up long-term debt that doesn't have to be paid for more than a year or longer. Keeping an eye on a company's long-term debt load is critical. While only the current portion is due within a year, the year of debt may come due shortly. If the company is unable to pay the debt or refinance it by borrowing from someone else, the company may default. When a company defaults, the lenders may threaten to take control of the company.
- **Other long-term liabilities:** This includes liabilities, due in more than a year, that don't fit in any of the other categories. A company will break down liabilities that are in here in the footnotes to the financial statements.
- **Deferred income taxes:** Companies must keep two sets of financial statements. There's the version you see, which is presented in this book, and a version for tax purposes for the IRS. Deferred income taxes help reconcile the differences. If a company has deferred income taxes, that means it may owe taxes in the future.

Shareholders' equity represents the total claim investors have on a company's assets, free-and-clear of debt. That includes money investors injected into a company, in addition to profits that the company has held back, or retained. The equity section of many companies' balance sheets include the following sections:

- ✓ **Preferred stock:** Companies may issue ownership stakes that are kind of a blend between debt and equity. Like debt, preferred stock pays a cash payment that's arranged ahead of time. However, as with common stock dividends, companies may suspend these preferred stock payments at any time.
- ✓ **Common stock:** When you're looking to buy a stake of a company, typically these are the shares you're buying.
- ✓ **Retained earnings:** It's up to a company whether or not to return its profits to shareholders in the form of dividends. If the company keeps earnings, it records the sum here.
- ✓ **Treasury stock:** Sometimes not all of a company's shares are available to bought or sold. A company might buy back its stock when it thinks it's cheap, and put it aside. A company might also authorize to issue stock, but not actually issue it. Either way, *the pool of unused shares are called treasury stock.*
- ✓ **Total shareholders equity:** The shareholders equity line of the balance sheet measures the value of shareholders' stake in the company.

You only need three formulas to common size the entire balance sheet:

- ✓ **Assets:** Divide each type of asset by the company's total assets.
- ✓ **Liabilities:** Divide each type of liability by the company's total liabilities and stockholder's equity.
- ✓ **Equity:** Divide each category of equity by the company's total liabilities and stockholders' equity.

Common sizing a company's liabilities gives you an instant view of where a company gets the money to keep itself going, or its **capital structure**. *Understanding a company's capital structure is key to understanding how well it's positioned to withstand an economic downturn or how profitable it will be during strong economic growth.*

When companies rely on borrowed money to pay for their operations, it's called leverage. Leverage can greatly enhance a company's returns for stock holders as long as the company can comfortably keep up with its interest payments.

The **index-number trend method** is a great way to help you spot changes in a company's capital structure over time. You can do an index-number analysis by choosing a year to be your starting point and then compare all assets, liabilities and equity to that point.'

For instance, if you want to start your analysis of Coca-Cola since 2005, you would first download the balance-sheet items for 2007, 2006, and 2005. In Table 6-4 you can see what some of the key parts of Coke's balance sheet were in those years.

Table 6-4 Coca-Cola's Balance Sheet Since 2005

\$ in millions	2007	2006	2005
Cash and cash equivalents	\$4,308	\$2,590	4,767
Property, plant and equipment	8,493	6,903	5,831
Long-term debt	3,277	1,314	1,154
Shareowners equity	21,744	16,920	16,355

To create an index-number table, divide each line in the balance sheet by the corresponding value for the base year and then multiply by 100.

For instance, to calculate the index-number value for Coke's cash and cash equivalents in 2006, divide its cash and cash equivalents in 2006 (\$2,590) by cash and cash equivalents in 2005 (\$4,767) and then multiply by 100. The result is 54.3. If you complete the analysis of Coke's balance sheet, you get something that looks like Table 6-5.

The index-number value of the base year, 2005 in Table 6-5, will be 100. 100 is the baseline of our analysis.

Table 6-5 Index-Number Analysis of Coca-Cola's Balance Sheet

\$ in millions	2007	2006	2005
Cash and cash equivalents	90	54	100
Property, plant and equipment	146	118	100
Long-term debt	284	114	100
Shareowners' equity	133	103	100

How do you determine whether a company can handle its short-term bills?

Analyzing **working capital** is one of fundamental analysts' favorite tools to access a company's immediate financial situation. *Working capital tells you whether a company can access cash needed to pay its most pressing bills over the coming year. It's a measure of short-term liquidity.*

Working capital = Current assets – current liabilities

If a company has positive working capital and more current assets than current liabilities, that gives a fundamental analyst a bit of comfort. However, if current assets are less than current liabilities — that means if a company's business hits a snag — it may be forced to extreme measures to meet its bills, including selling off manufacturing plans or equipment in a fire sale.

The *current ratio* attempts to put a company's current assets into perspective by comparing them with current liabilities. The formula is:

Current ratio = Current assets / current liabilities

The higher a company's current ratio, the better prepared it is to pay for liabilities due within the year.

As a very general rule of thumb, fundamental analysts like to see at least a current ratio of 1, or even 1.5. The typical company in the Standard & Poor's 500 index had a current ratio of even more than that, 1.72 as of 2008.

But because different businesses require different levels of short-term liquidity, you should always compare a company's current ratio to its industry. You can see what the typical current ratios for several industry sectors are by checking out www.reuters.com.

*When companies issue too many shares, they are in effect slicing their profits into smaller and smaller slices. This process of bringing in more investors is known as **dilution**. And since dilution can seriously water down the value of your investment, it's something worth being aware of as a fundamental analyst. The more shares outstanding, the smaller the slice of profits you're entitled to.*

A company may increase its number of shares outstanding for a number of reasons, including to:\

- ✓ **Acquire another company using its stock.** When a company's stock price is high, relative to competitors', it may use its shares as a currency for acquisitions. A company may issue new shares and use them to buy another firm. Stock deals can be popular with companies, since they don't consume precious cash, and investors like them because they may be tax-free events.
- ✓ **Pay stock options to employees.** Hoping to make the workforce feel like and act like owners, some companies may issue shares to employees and executives. Stock options allow employees to buy shares of stock at discounted prices, as long as the company's stock rises.
- ✓ **Reduce leverage.** Companies that have borrowed too much in the past and have a life-threatening brush with bankruptcy, may try to clean up their balance sheet by issuing stock and paying down debt.

Stock options, a form of compensation for employees, are tied to the company's stock price. If the company's stock rises, employees may cash in the options in exchange for company stock, forcing the company to sell additional shares to meet the demand for new shares.

The risk of dilution is why fundamental analysts should pay close attention to a company's diluted earnings per share, which accounts for the potential dilution. Some companies periodically attempt to reduce the danger of dilution and make their shares more valuable by buying back shares. **In a buyback, companies use their cash to take shares off the market.**

Stocks will often rally after a company announces a stock buyback. But fundamental analysts know better than to fall for this trap. For one thing, companies might buy back stock with borrowed money, which increases their interest costs and risk. Many companies also say they will buy back stock and never actually do. Other firms end up issuing more new shares than they bought back, all but erasing any benefit of the buyback.

The statement of **cash flows, or cash-flow statement**, is all about showing you the money. The statement meticulously tracks the flow of cold hard cash in and out of a company. There's nothing more reassuring than knowing a company is bringing in cash.

Accounting rules, even if properly followed, may give the impression a company is doing better than it really is. Profit, as measured by rules made by accountants, are subject to dozens of estimates, approximations and hunches. But cash is cash. You either have it or you don't.

The statement of cash flows can provide valuable information when evaluating a company because it:

- ✓ **Cuts through the optics of accounting.** Measuring a company's profit is a pretty convoluted process.
- ✓ **Links the different financial statements together.** The income statement and balance sheet are somewhat independent of each other, since they're measuring different aspects of a business. The statement of cash flows, though, draws upon information from both the income statement and balance sheet to give you one, complete view of the company.
- ✓ **Highlights cash generated from actually doing business.**

A company that offers customers, who agree to buy products or services now, a very lenient repayment schedule. Doing so would allow the company to book revenue now, boosting net income. The trouble, though, is that the company is essentially stealing net income from a future period. When companies do this, it's referred to as **channel stuffing**, because the company is pushing product into the hands of customers prematurely to book sales now. The statement of cash flows, however, makes channel stuffing easy to spot, since the company didn't receive cash.

Cash coming into or going out of a company is placed into one of three categories, including:

- ✓ **Cash flows from operating activities.** It counts cash coming in from customers as well as cash used to pay suppliers for materials, to the government for taxes, and to pay workers' salaries.
- ✓ **Cash flows from investing activities.** Companies keep careful track of money they've spent upgrading, or investing in, themselves.
- ✓ **Cash flows from financing activities.** While companies are generally hoping to become self-sufficient and support their operations with the cash they generate from their business, sometimes they need cash injections. This section of the balance sheet tallies up how much cash is plowed into a company by lenders and investors. And on the flip side, this section accounts for cash used to pay cash dividends to investors or to pay down debts.

Examining a company's cash flow from operations

This key section, the first in the cash-flow statement, measures **cash from operations**, or formally called **cash provided by / (used in) operating activities**. The section tells you how much cash the company generated, or used, in the course of doing business.

Just remember when a number in the cash-flow statement is positive, that means the activity brought cash into the company. Similarly, when the number is negative, the item consumed cash.

A few adjustments made to net income to arrive at a company's cash from operations are described in the following sections.

Depreciation and amortization

Usually, the biggest adjustment to net income to convert it into cash from operations is **depreciation and amortization**. Depreciation is an expense companies are required to include on their income statement, that doesn't actually cost a company cash. Depreciation tallies the expense of the wear and tear on its equipment. Amortization, on the other hand, is the erosion of value of intangible assets, like patents or trademarks.

Depreciation is **added** back to net income when measuring a company's cash flow from operations.

Tax adjustments

Companies keep two sets of books. There's one set for investors, which measures earnings according to the accounting rules. Then there's a set required by the Internal Revenue Service for taxes.

When a company actually writes a check and pays taxes, which aren't recorded on the income statement, it must subtract the amount from net income. It's **subtracted** since paying the taxes ate up some of the company's cash.

Gains on divestitures

When a company sells a unit, it may add the profit on the sale to its net income. But remember, that profit didn't result from the company selling products or services. Since the sale didn't generate sales from operations, the amount is **subtracted** from net income.

Asset impairments or losses on sales of discontinued operations

Believe it or not, companies sometimes make poor business decisions. They might try a new business concept, which flops spectacularly, or realize an asset they bought has lost its value. When companies are hit with these charges, accountants consider them to be costs and require the companies to take a hit to the income statement. However, savvy fundamental analysts know many of these flops don't actually cost companies cash. And that's why many of these charges are **added** back to net income to arrive at cash from operations.

Accounts receivable

Accounts receivable is a tally of how much its customers owe for products they've bought. If you see accounts receivable soar, that means customers are mostly buying on credit instead of paying cash. The increase in accounts receivable eats into a company's cash because the company is essentially giving customers a credit card.

If you're worried a company might be stuffing the channel, pay close attention to the change in accounts receivable. A big jump in accounts receivable compared to the increase of a companies' revenue can be a tip-off.

Accounts payable

When you buy something using a credit card, you get the asset without using cash. It's the same concept with companies, who may buy supplies or materials on credit. They're able to get their hands on the things they need to conduct business, without using cash. When a company's accounts payable increases, it's considered a boost to cash and **added** to net income.

If you notice accounts payable is rising relative to a company's cost of goods sold, watch out. It might mean the company isn't paying its bills on time, which may inflate its cash.

Inventories

Just-in-time manufacturing, companies go to great lengths to keep inventories low. Buying piles of materials needed for business consumes precious cash. So by keeping inventory levels down, companies can hang onto cash. If inventories rise, the increase is **subtracted** from net income to measure a company's cash from operations. Likewise, if a company uses up inventory, it's a boost to its cash levels.

Net cash (used in) / provided by operating activities - Calculated

When net cash (used in) / provided by operating activities is positive, that means the company generated cash from its normal line of business. If the number is negative, that means the company burned cash. Some companies will put the negative number in parentheses while others make the number red in the financial statements.

Considering a company's cash from investments

Cash from investing or cash provided by / (used in) investing activities. This part of the cash-flow statement lets you see how much cash the company is using to keep its factories humming or stores looking presentable. Generally, investments companies make in themselves can consume large amounts of cash for things including:

- ✓ **Updating stores to remain relevant.** A retailer, for instance, may need to periodically remodel stores to keep them interesting to shoppers.
- ✓ **Enhancing capacity.** A manufacturer that's running full tilt may need to add warehouse space to handle increased demand.
- ✓ **Upgrading equipment**
- ✓ **Acquisitions**

✓ **Divestitures.** When companies sell off a unit, they typically receive cash. That cash received isn't from operations. It's from investing; at least that's what the accountants say. Even if a company technically lost money on a unit that's sold off, if it gets at least some cash, that's still considered a positive cash flow.

For simplicity, companies will often lump all their investments in improving, enhancing or updating their facilities into a single item on the cash-flow statement called **capital expenditures**, or **cap ex** for short.

Getting into a company's cash from financing activities

Companies need funding to keep themselves going. The money borrowed is considered a positive cash flow from financing activities. Generally, cash is brought in by borrowing money or selling stock to investors. All this is summarized right in the **cash from financing activities** section of the statement of cash flows

The biggest uses or generators of cash from financing activities include:

- ✓ **Increasing or decreasing the company's debt load:** Here, in this section of the statement of cash flows, you can see whether or not a company is generating cash by borrowing or using cash by paying back debt. If a company decides it has borrowed too much, for instance, it may choose to use cash to pay down its debt.
- ✓ **Buying back the company's stock:** When they do this, they use cash to take shares out of the hands of the public by buying them.
- ✓ **Paying out dividends to shareholders**
- ✓ **Net cash provided by / (used in) financing activities:** Net cash provided by / (used in) financing activities, or cash from financing activities, shows you whether the company was a net gainer or user of cash after considering all money-raising events.

Investors often pay very close attention to a company's revenue and profits. Too much attention, probably. There's a huge incentive for companies to never miss earnings expectations, or how much investors think the company will make, since doing so can cause a stock price to fall precipitously.

Due to the flexibility of accounting rules, there are ways for management to *manage earnings*. The term “manage earnings” describes a whole host of things management can do to even out net income and earnings each quarter, and reduce the chances of disappointing investors.

Generally, financial transactions use **accrual accounting**. *Accrual accounting records revenue when sales are made, and costs when they're incurred*. That is very different from cash accounting, which records revenue when sales are collected and costs are paid.

When a company's profit is widely different from the cash it's bringing in, that's something of great importance to a fundamental analyst

One of the fastest and most effective fundamental ways to analyze a statement of cash flows. Profits certainly are important. But cash flow is king. Compare a company's net income with its cash from operations.

If a company is generating as much cash as it's reporting in net income, that can be a good indication it has **high-quality earnings**. High-quality earnings are those that are backed up by cold hard cash, not just smoke and mirrors made possible from accounting rules.

Below I'll show you how to perform this form of cash-based earnings-quality analysis with the following steps:

1. Look up the company's net income.
2. Look up the company's cash flow from operations.
3. Compare net income with cash flow from operations. Cash flow from operations should be at least equal to, if not larger, than net income.

Table 7-6 Sizing Up a Company's Earnings Quality

If cash from operations is ...	It means the company ...
Greater than net income	Generates more cash than it reports to shareholders as earnings. It has high-quality earnings.
Less than net income	Generates less cash than it reports to shareholders as earnings. It has low-quality earnings

Just because a company's net income is less than its cash flow from operations doesn't mean it's committing fraud. It just means a substantial portion of the profit it's reporting isn't materializing in cash.

Free Cash Flow

Free cash flow tells you how much cash a company generates (or uses) during the normal course of doing business, including the cost of upgrading and maintaining its equipment and facilities.

Watching a company's free cash flow is kind of like watching the fuel gauge when you're driving.

Some analysts attempt to determine how much cash a company is throwing off by studying **earnings before interest, taxes, depreciation and amortization, or EBITDA**. EBITDA adjusts a company's net income by adding back interest, taxes, depreciation, and amortization.

Don't make the mistake of assuming EBITDA is a company's cash flow, even though many analysts do. EBITDA doesn't factor in the cash eaten up by inventory, extending credit to customers or used to buy new equipment.

Free cash flow = Cash from operations – Capital expenditures

Some beginning fundamental analysts are uncertain why capital expenditures should be subtracted from cash flow from operations to arrive at free cash flow. The idea is a company cannot continue very long without reinvesting and upgrading its infrastructure.

Companies that run out of cash are often history. When a company relies on borrowed money, the death toll occurs when a company misses interest payments on its debt. At that point, lenders can take over the company and force it to restructure itself. But what if a company hasn't borrowed? For these companies, the music stops when they run out of cash.

When you do a cash-burn analysis, you measure how long a company's cash pile will last if it continues to consume cash at its current rate.

Year's supply of cash = Cash and cash equivalents / free cash flow

If the company burned cash, it will have a negative free cash flow. Convert it into a positive number before using the formula above.

Fundamental analysts pay close attention to companies' cash-burn rates for this reason, since it's critical for companies to generate enough cash to become sustainable.

FINANCIAL RATIOS

Financial ratios are helpful in fundamental analysis because they allow you to:

- ✓ Compare several companies' financials against each other.
- ✓ Draw conclusions from all the financial statements.
- ✓ Get quick insights.

Employee productivity. Just **divide a company's total revenue by its number of employees** and you find out, on average, how much business each employee brings in. The higher the number, the more productive each worker is. You can then compare the company's productivity to rivals in the same industry.

When analyzing financial ratios, it's most useful to compare a company with its competitors. For instance, ExxonMobil and energy companies generate high revenue per employee since their businesses are so *capital intensive*. Capital-intensive businesses rely on machinery to generate a large portion of their revenue, which makes the employees look like productivity superheroes.

Table 8-1

Squeezing Revenue Out of Workers

Industry sector	Revenue per employee in \$ thousands
Energy	\$4,507
Utilities	\$1,290
Communications	\$780
Basic materials	\$716
Health care	\$655
Consumer staples (including food)	\$574
Technology	\$538
Financial	\$472

Generally, financial ratios fall into one of five categories, including:

- ✓ **Profitability:** These ratios allow you to put the profit, or loss, generated by a company into perspective. These ratios are typically called **profit margins**. But there are several kinds of profit margins, including **gross, operating and net**.
- ✓ **Management effectiveness:** However, ratios like return on assets, return on equity and return on invested capital are affected by CEOs' decisions.
- ✓ **Efficiency:** how wisely the company is managing its resources.
- ✓ **Financial condition:** The current ratios checks a company's staying power.
- ✓ **Valuation**

Using ratios to grade management

• Return on equity

For many investors, the key ratio to pay attention to is **return on equity, or ROE**. This measure tells you how much profit the company is generating from money entrusted to it from investors. The formula is:

$$\text{Return on equity} = \text{Net income} / \text{average shareholders' equity}$$

Don't assume that just because a company has a higher ROE than another, it's a better company. A company's ROE may be depressed because it has a large investment in assets. Those assets might give the company an edge over rivals in the long run. That's why it's best to compare one company's ROE to another's, in the same industry.

• Return on invested capital

For savvy fundamental analysts, **return on invested capital, or ROIC**, is the ultimate gauge of a company's profitability. It tells you how much money the company makes on all the money, including both debt and equity, that's been entrusted to it.

Steps to calculate ROIC (There are many variations to calculate ROIC) :

1. **Calculate the company's earnings before interest and taxes, or EBIT**
This is a rough measure of the company's cash profit, excluding the cost of paying interest expense and taxes. It's a very rough estimate of how much profit the company has available to pay interest with. The formula looks like this:

$$(\text{Revenue} - \text{cost of goods sold} - \text{SG\&A} - \text{R\&D} - \text{depreciation and amortization})$$

For Cisco, that's:

$$(\$39,540 - \$14,056 - \$10,387 - \$5,153 - \$499) = \$9,445$$

2. **Adjust EBIT for taxes.** Multiply the answer from step 1 by $(1 - \text{tax rate})$. This adjusts EBIT for taxes.

For Cisco, that's:

$$\$9,445 * (1 - 0.375) = \$5,903. \text{ That's Cisco's tax-adjusted EBIT.}$$

3. **Calculate the total capital possessed by the company for the most recent year.** This measure tells you how much money, including **debt** and **equity** from shareholders, the company has at its disposal. If you need a refresher on the difference between debt and equity, review Chapter 6.

$$(\text{Total common equity} + \text{current portion of long-term debt} + \text{long-term debt})$$

For Cisco, that's:

$$(\$34,353 + \$500 + \$6,393) = \$41,246 \text{ for 2008}$$

4. **Calculate the total capital for the previous year.** For Cisco, that's:

$$(\$31,480 + 0 + \$6,408) = \$37,888 \text{ for 2007}$$

5. **Take the average total capital.** Add the two years together and divide by 2.

For Cisco, that's:

$$\$39,567 = (\$41,246 + \$37,888)/2$$

6. **Calculate ROIC.** Divide the answer from step 2 by the answer from step 5.

For Cisco, that's:

$$\$5,903/\$39,567 = 0.149$$

7. **Convert ROIC into a percentage.** Multiply the answer from step 6 by 100. For Cisco, that's $0.149 * 100$, or 14.9%.

For an ROIC, 14.9% is very strong. That means the company is generating a nearly 15% return on all the cash that's entrusted to it. The average ROIC of S&P 500 companies was about 13 in the mid-2000s. But again, it's best to compare a company's ROIC with other firms in the industry, and since the industry average is 15, Cisco is right in line.

When ROIC is lower than return on shareholders' equity, that tells you part of the company's returns are the result of the use of borrowed money, or **leverage**. Borrowed money can boost a company's returns when things are good, but sting when business slows. Meanwhile, during a credit crisis, if borrowing costs rise, a highly leveraged company will see its ROIC fall.

Checking up on a company's efficiency

• Accounts receivable turnover

This ratio tells you how quickly a company is collecting its bills from customers. It's helpful for many investors to convert this into the number of days it takes to collect the bills. Here's how:

1. **Calculate the average accounts receivable.** Add the first year's accounts receivable to the second and divide by 2. For Cisco, that's:

$$\$3,905 = \$3,821 + \$3,989 / 2$$

2. **Divide the answer in step 1 by revenue.** For Cisco, that's:

$$0.099 = \$3,905 / \$39,540$$

3. **Convert step 2 to days by multiplying by 365.** For Cisco, that's:

$$0.099 \times 365 = 36$$

It's valuable to compare a company's accounts receivable turnover and see if it's getting larger over time. That can be a warning sign that the company is having trouble collecting from customers.

• Inventory turnover

Inventory turnover tells you how long it takes the company to clear out the goods sitting in the warehouse. The good news is calculating the formula works the same as accounts receivable turnover, except you substitute average inventories with average accounts receivable and cost of goods sold with revenue.

The formula looks like this:

$$\text{Average inventory} / \text{cost of goods sold} * 365$$

You'll want to be careful of companies if the days to clear inventory is rising at a rapid clip or stretches well above 40 days.

It takes longer to clear inventory in some industries than others. For instance, a shipbuilding company may hold inventory for a longer time before it's sold. That's why it's important to track the company over time to see if the number of days to clear inventory is rising.

• Accounts payable turnover

With this measure, accounts payable turnover, you can find out how long a company is taking to pay its bills. You don't want to invest in a deadbeat company that's not paying its bills, since it might find itself getting cut off from suppliers. Here's how to calculate accounts payable turnover, converted into days:

- 1. Calculate the average accounts payable.** Add the first year's accounts payable to the second year's, and divide by 2.
For Cisco, that's $\$827.5 = \$869 + \$786 / 2$
- 2. Calculate the increase, or decrease, in inventory.** Subtract the previous year's inventory by the first year's to see if the company added or removed from its stockpiles. For Cisco, that's: $\$1,235 - \$1322 = -\$87$. That means Cisco drew down its inventory.
- 3. Add the answer from step 2 to the company's cost of goods sold.** For Cisco, that's $\$13,969 = -87 + \$14,056$
- 4. Divide the answer from step 1 by the answer of step 3.** For Cisco, that's $0.059 = 827.5 / 13,969$
- 5. Multiply the answer from step 4 by 365 to convert to days.** For Cisco, that's 21.6.

A rapid accounts payable turnover ratio may indicate the company is comfortable with its short-term cash flows. If you see this slow down, it could be a sign the company is trying to bolster its short-term cash.

Evaluating companies' financial condition

- **Debt to equity**

The debt-to-equity ratio is one of the most basic measures of a company's debt load. It tells you, at a glance, how a company's pile of debt compares with the amount of money it has raised from stock investors. **The higher the number, the more loaded it is with debt relative to stock.** The formula is:

$$\text{Current portion of long-term debt} + \text{long-term debt} / \text{total equity} \times 100$$

So for every \$20 that the company has borrowed, it has raised \$100 from equity investors. Generally, you don't want to see companies borrowing much more than \$100 for every \$100 raised from investors.

- **Quick ratio**

Some fundamental analysts think including inventory isn't a great idea, since you can't exactly sell off raw materials very easily to pay bills. That's where the quick ratio comes in. It disregards inventory to help you really see how able a company is at meeting short-term obligations. The formula is:

$$\text{Cash and cash equivalents} + \text{investments} + \text{accounts receivable} / \text{current liabilities}$$

That means that the company has \$2.20 in assets that are already cash or can be easily turned into cash to handle liabilities due in a year.

You want to see this ratio be at least 1, and preferably higher.

- **Interest coverage ratio**

The interest coverage ratio helps you figure out how well a company is able to afford its interest payments. Just **divide EBIT by the company's interest expense.** **The higher the ratio, the better.** After opening the 10-K, using the instructions in Chapter 4, just search for the words "interest expense" and you'll turn up the amount.

Getting a handle on a company's valuation

More often than not, the ratio used to measure a stock's valuation is the price-to-earnings ratio (P-E).

• Price-to-book ratio

This ratio compares a company's stock price to its book value, or value of everything the company owes, free and clear of debt. The formula for price-to-book is:

Price-to-book = Company's stock price / (shareholders' equity / number of shares outstanding)

The higher the price-to-book ratio, the more investors are paying up for the companies' assets. The ratio will rise and fall as investors get more confident or less confident about the company and the stock market.

How do you know if a stock's price-to-book is high or low? One easy way is comparing it with the price-to-book of stocks inside exchange-traded funds, or ETFs, which are baskets of stocks. iShares, for instance, has an ETF that tracks stocks with high, average and low price-to-book ratios. Stocks with **low price-to-book ratios are called value stocks**. And stocks with **high price-to-book ratios are called growth stocks**. There's no set definition of what defines a high or low book value, and it changes over time.

• Dividend yield

The dividend yield tells you how much the company is paying out in cash dividends relative to the stock price. You can calculate a dividend yield by **dividing the amount of dividends a company pays out in a year by its stock price, and then multiplying by 100**.

In theory, the dividend yield is the cash payout you receive by holding onto a stock. Some investors are tempted to automatically buy stocks that pay large dividend yields. However, dividends can be cut with little notice. In fact, companies with large dividend yields are often those under the most distress.

• Earnings yield

A company's earnings yield tells you how much, as a percentage of a stock's price, the company is generating in profit. The earnings yield gives you a way to **compare a company's profit generation with other investments**. To get a stock's earnings yield, **divide a stock's earnings per share over the past 12 months by its stock price**. When a stock's earnings yield is well below the market or that of rivals, it might be a sign the stock is overvalued.

The earnings yield is especially valuable when trying to determine if the stock market is overvalued. You can get this by dividing the earnings generated by the S&P 500 over the previous 12 months by the value of the S&P 500. When the yield gets lower than what you can get by putting your money in safer securities, like government bonds, it's a warning you're not getting paid for the risk you're assuming.

How to Calculate the P-E

P-E = Stock price / earnings per share

Several variants of the P-E:

- ✓ **Trailing P-E:** When you divide a stock's price by its net earnings per share over the past 12 months' earnings, or trailing earnings, you get the trailing P-E. This is considered one of the most conservative ways to measure P-E, since it's based on earnings that have actually been reported.
- ✓ **Current P-E:** When you divide a stock's price by what it's expected to earn in the current fiscal year, that's the current P-E. Typically, the forward P-E will be based on several quarters of earnings reported by the company, plus a few quarters of estimated earnings. This is a fairly common way to measure a stock's P-E.
- ✓ **Forward P-E:** When you divide a stock's price by what it's expected to earn in the next fiscal year, you're taking somewhat of a leap. Estimates can be pretty unreliable going out this far, meaning that investors should take the forward P-E with a handful of salt.
- ✓ **Operating P-E:** When you divide by a company's operating income, you are trying to get an idea of what investors are paying for the company's profit, excluding unusual and one-time charges. Current and forward P-E ratios are usually based on operating income, since these rely on estimates. There is usually no way to accurately forecast one-time charges.
- ✓ **As reported P-E:** When you divide by a company's net income, which includes all charges and one-time items. Reported P-E tends to be higher than operating P-Es during times of economic stress, since companies take many charges for restructuring.

If someone is trying to sell you on a stock by pointing to its "low P-E," be careful you know how it's being calculated. Future P-Es are infamously too low, making a stock look cheap, since the denominator may be based on an overly optimistic estimate.

One of the beauties of the P-E ratio is its simplicity. With just one number, you can find out how much investors, on average, are willing to pay for a claim to \$1 of a company's earnings.

The long-term average P-E of stocks is about 15. If a stock rises above that, you need to be aware that you might be paying up for the stock. Be sure you're getting something for that extra price, such as growth.

Putting the P-E into perspective

The first thing you should do is compare a stock's P-E against the P-E of other companies in the same industry. Reuters (www.reuters.com/finance/stocks) has a powerful ratio calculator. Enter the stock's symbol in the black, select the "Ratios" option and click the Go button. You'll get the stock's P-E based on trailing earnings, as well as the P-E for the industry and the S&P 500.

The PEG

It's not uncommon for stocks with high P-Es to keep going higher. Many times, investors are willing to pay higher prices for companies that are growing more rapidly. Much of that has to do with the way the P-E is measured.

Imagine a company, which earned \$1 a share, is trading for \$20 a share. It has a P-E of 20, which might seem lofty if the rest of the stock market has a P-E of 15. But what if a year from now, the company's earnings rise by 30 percent? If the stock is still \$20 a share, that means it would have a P-E of 15, which would be in line with the market. So in a way, the stock wasn't all that overvalued because it grows into its valuation.

The importance of a company's growth rate is one reason for the PEG ratio. The PEG compares a stock's P-E to its expected growth rate. You simply **divide the stock's P-E by the expected growth rate**. You can estimate a company's growth rate yourself by examining historical increases in revenue and earnings. Or you can read analysts' reports, which forecast growth.

Investors generally consider a stock to be pricey if it has a PEG of 2 or more. Some investors also find a stock becomes attractive when its PEG falls below 1.

One of the most valuable things about the P-E is that it is constantly evolving as stock prices move. Unlike other fundamental ratios, which are based on fundamental data from previous quarters, the P-E changes as stock prices move.

Knowing the P-E of the market is very valuable, because it lets you see how pricey, or cheap, a company's stock is compared with the market. You can get a general warning if the stock market might be overvalued and headed for a correction if investors are paying lofty amounts for earnings.

The proxy statement

The proxy statement, or proxy, is one of the more interesting financial documents. Inside the proxy statement, companies lay out many of their deep, dark secrets that just don't fit into the neat rows and columns of the financial statements. Some of these details include executive pay, composition of the board of directors, and even how much the accounting firm is paid to watch over the financial statements. The proxy is a key document that describes in detail the nitty gritty aspects of a company including its strategic plan and how it will achieve its financial goals.

The proxy is worth paying attention to because it provides information about the:

- ✓ **Management's experience**
- ✓ **Board of director composition:** If you invest in a company, the board of directors is your watchdog
- ✓ **Compensation:** Want to know how much a CEO earns? It's not a secret; it's spelled out completely in the proxy.
- ✓ **Conflicts of interest:** A conflict of interest occurs when someone in the role of watching over the company may have a reason not to be very vigilant. Such potential conflicts must be broken out in the proxy.
- ✓ **Ownership details:** You can find out which officers or directors of the company are also big owners of the company's stock.
- ✓ **General thinking of other investors**

If there's one overarching theme of what to look for in the proxy, it's **corporate governance**. Corporate governance is a catch-all term to describe the safeguards a company has in place to make sure that the management of the company is acting in the best interest for the shareholders. It's the way public companies deal with one of the greatest pitfalls of our financial system: the agency dilemma.

The basic idea of the agency dilemma is the fact that the people who own the company aren't the ones necessarily running it. When you buy 100 shares of a company, for instance, you're not given the right to tell the company what kinds of products it should sell. You're surrendering those key business decisions to the hired hands that run the business. And that includes the CEO and the rest of the management team, such as the chief financial officer and chief operating officer.

Not surprisingly, when there are hired hands running an enterprise on behalf of the owners, there's a potential for problems. And that's the case with companies, too. That's where corporate governance comes in. Companies are required to have a team of business experts, called a board of directors, that are supposed to watch over the management team. If the board feels management is making poor decisions with the company's resources, it's up to them to either reprimand or replace them.

The board of directors is really your only advocate in the boardroom. Unless you own enough shares to get a direct hand on how a company is run, you're leaving it up to the board to make sure your money is properly handled.

Boards of directors also have a number of committees, which take on specialized oversight roles:

- ✓ **Audit committee:** If there's one board to pay most attention to, it's this one. The audit committee is responsible for directly connecting with the accounting firm that checks over the company's books and records. The members of the audit committee must be *independent*, meaning that they have no outside business dealings with the company.
- ✓ **Compensation committee:** The board members on this committee have the job of determining how much to pay the people running the company.
- ✓ **Nominating committee:** These board members evaluate candidates for key jobs at the company.

Over-boarding is considered a corporate governance risk, since the directors are distracted and potentially unable to adequately watch over any one company.

Typically, the first section of a proxy provides fairly complete biographies of the members of the board of directors. Pay close attention to how many corporate boards the directors sit on. If you notice several members of the board are sitting on three, four or more boards, you might wonder how much time they're able to dedicate to the company you've invested in.

Most companies will reserve a spot in the proxy, usually below the list of the directors, to outline steps that have been taken to make sure the board of directors are proper watchdogs. One of the most critical ways to do this is by ensuring that most of the board members are independent, or have no direct business relationship with the company.

The key aspect of this part of the proxy is to highlight which board members sit on which committees. You'll want to pay very close attention to who is sitting on the audit committee, since this is the group of people that's supposedly there to protect you from accounting fraud.

When looking over all the directors on the board, you want to pay particular attention to the members of the audit committee. Make sure they are financially literate. In addition to the competence of board members, you want to look for involvement and participation. You want to see the board meeting at least four times a year, or once a quarter.

You also want to make sure that the board members are actually showing up for the meetings. If you see multiple members missing 25% or more of the meetings, you might be concerned that they're not paying close enough attention to the matters at hand.

Most proxy statements will contain a section, often called **related-person transactions or related-party transactions**, which outlines any business relationships board members have with the company they're overseeing.

If you don't read anything else in a proxy, always check out the related-party transaction section. This is where a company must lay out any potentially sweet deals it has going with its officers and directors.

The payments received by directors are disclosed for all to see. Keep your eyes open for sudden increases of pay to board members. A big spike in pay might indicate the company is trying to ensure a very amicable board of directors.

Just pay attention to the total amount of compensation. Be sure that the company clearly discloses all the benefits directors receive, including the perks, and make sure they're not excessive.

Even the board has someone watching it: **the auditor**. The auditing firm has the job of checking over the books and records of a company to make sure it's representing everything accurately.

One of the biggest inherent potential conflicts with an auditing firm is the fact it is paid by the company to provide the audited results. That's a conflict that you kind of have to live with, since that's how the system works.

If you see that the auditing firm is getting paid for all sorts of other services for the company besides conducting the audit, you should get concerned.

At the bottom of the proxy, the company must disclose all the fees it paid to its auditing firm. The fees are organized into:

✓ **Audit fees**

✓ **Audit-related fees:** These are fees generally connected to the audit process, typically a review of the company's financial controls.

✓ **Tax fees:** Companies will often tap their auditing firm for tips on ways to manage their tax bills.

✓ **All other fees:** Here's the line item you want to pay close attention to. These "other" fees include consulting fees for information technology services and other advisory services that have nothing to do with the company's audit.

Most CEOs' pay is broken into these parts:

✓ **Salary**

✓ **Bonus:** These discretionary payments are generally awarded at the end of the year for meeting certain performance targets.

✓ **Equity awards:** Top executives will often be given compensation that's tied to the company's stock price. These grants may become very valuable if the company's stock price rises in the future. Equity awards are generally stock options or **restricted stock**.

Salaries for most executives, by and large, aren't where the vast majority of CEOs' compensation comes from. Instead, it's from stock options. Stock options are financial instruments that give their owners the right, but not the obligation, to buy a stock at a predetermined price.

Options are common tools to incentivize executives. For instance, a CEO might get an option to buy 100,000 shares of a stock for \$30 a share when the company's stock price is \$30. If the CEO is successful and the stock price rises to \$50 a share, the CEO may exercise the option and buy 100,000 shares of stock worth \$5 million, for \$3 million. The difference, the \$2 million, goes to the executive as compensation.

CEOs might also receive restricted stock. These shares are given to an executive, but cannot be sold unless certain criteria are met, typically after a period of time has lapsed.

If you are a value investor, looking to buy stocks at low valuations, you might take comfort in seeing whether any well-known mutual fund managers own a stock. But some investors take comfort when the officers and directors own large positions in a stock, since they have some skin in the game and therefore stand to lose personally if the stock price falls. Most proxy statements contain a table, usually close to the bottom of the document, which spells out how many shares the officers and directors of the company own.

Some officers and directors feel so strongly a company's stock price is about to rise that they may buy the company's stock with their own money. These types of buys are viewed as bullish signals, because executives are reaching into their own pockets to buy shares, rather than receiving handouts as part of compensation packages.

These purchases are often disclosed and summarized in the proxy statement, described usually as **open market purchases**.

The proxy lists all the items of business that are up for a shareholder vote.

Don't discount and skip reading the shareholder proposals, especially the more outlandish-sounding ones.

MAKING MONEY FROM FA

Fundamental analysts often concentrate on a few aspects of a stock, which might make it an attractive investment, including:

- ✓ **Staying power:** You want to make sure a company has the financial resources to endure a downturn and come out on the other side.
- ✓ **The trajectory of the fundamentals:** Since a stock price, over time, is connected to a company's revenue and earnings, fundamental analysts try to see improving trends in the company's revenue and profit.
- ✓ **Evidence of skilled management:** Skilled managers can protect their company's business from competition with strong brands, service or quality.
- ✓ **Valuation:** Even if a company is performing poorly, the stock can still be a good investment if the bad news is already reflected in the price.
- ✓ **Dividend payments**

You're not the only one with instant access to a company's financial statements and performance. Scores of mutual fund companies, hedge funds, and other large investors get the same fundamental data you do and comb through them with armies of analysts and computers. If they see a stock that's undervalued, they may move quickly and push the stock price up. And when a stock moves up, other investors may pile on and push it higher.

All this means that many investors who try to buy and sell individual stocks at just the right times are often unsuccessful. And that's why it's often best for many investors to simply buy every stock on a stock market index, such as the Standard & Poor's 500, through an index fund, rather than try to time the market. Even the king of fundamental analysis, Warren Buffett, wrote in his 1996 letter to shareholders: "Most investors, both institutional and individual, will find that the best way to own common stocks is through an index fund that charges minimal fees."

Despite the warning above, Fundamental analysis can be a tool of reason, helping you to at least recognize when investors appear to be paying more for an asset than they have historically or are betting on an overly optimistic future. Fundamental analysis is that one tool that may help save you from falling prey to a bubble, too.

Finding companies that have staying power

If you take the time to find companies that are just down, and have the ability to recover, you can pick up good companies for low prices.

Typically, when you're looking for companies that have the resources to survive, you want to consider some key elements.

Liquidity: Cash is king

If you're trying to buy into a company on the cheap, you want to make sure it has the ability to weather the difficult times. And that calls for a close examination of liquidity, or ready access to cash. Make sure you pay close attention to a company's current ratio.

There's a very important pecking order to investing you need to be very aware of. When you buy stock in a company that's on the decline, you're playing a bit of a game of chicken. In the case that the company defaults, or fails to pay its interest back to lenders, there's a chance that the company may be restructured or sold off. And if that happens, as a stock holder, you're the very last one in line at the asset buffet. Stock investors come behind everyone, including employees owed their salaries and bond holders, for any money that's left over. That's why when you invest in a company that is dangerously faltering, you must be absolutely sure that you've carefully measured whether or not it has enough liquidity to keep going.

Low debt loads and big piles of cash

When you're looking for cheap stocks of companies that may survive, be certain to consider the companies that have little to no debt. Companies that don't have an enormous amount of money to repay can tread water and get their operations in order before they have to worry about meeting onerous interest costs. Pay close attention to a company's interest coverage ratio. The lower this ratio, the better the company will be able to handle a downturn. And make sure the total amount of debt a company owes is reasonable by considering the debt-to-equity ratio.

Just because a company has no debt doesn't mean the stock will rise. Apple and Google, for instance, had no debt at the end of 2008, but still saw their shares fall 57% and 56%, respectively. Again, I stress, there's no single indicator to tell you whether or not to buy a stock.

One trick that some fundamental analysts use to get a decent idea of the financial bedrock of a company is to compare its stock price to the amount of cash per share it has. Sometimes stocks get beaten up so badly, the company actually has more cash in the bank than its value in the stock market. This analysis is a good complement to studying a company's price-to-book ratio, which also considers how much debt a company has

To compare a stock's price to its cash per share, follow these steps:

- 1. Obtain a company's total cash and cash equivalents.** These data are available on a company's balance sheet. If you're not sure how to get this information, there are detailed instructions in Chapter 6.
- 2. Divide the number from Step 1 by the number of shares outstanding.** You can get a company's number of shares outstanding from the balance sheet, too. The step gives you the company's *cash per share*.
- 3. Divide the answer from Step 1 by the answer in Step 2.** If the answer is a negative number, that means the company has more in cash than its value in the stock market. Some consider this to be a potential sign the stock is undervalued.

When a stock price falls below a company's cash per share, don't assume it's a screaming buy.

Sometimes a stock price gets beaten below cash levels due to excessive debt. In that case, the cash doesn't really belong to the company, but to the lenders. That's why the price-to-book ratio is so helpful, since it considers the role of debt. A stock with a low stock price to debt might also indicate investors have no confidence in the management team.

Stable cash flows

Many companies with stable cash flow feel inclined to boost their profitability by borrowing. Unfortunately, though, these piles of debt can haunt companies if business slows. Fundamental analysts may look for companies that have stability and the discipline to avoid excessive debt.

Looking for a company on the rise

Fundamental analysis can be extremely helpful in pinpointing companies where the earnings and revenues are in an upswing. Some investors, called momentum investors, like to buy into companies when they're reporting faster and faster growth. These investors are betting they can grab on to a company with lots of good things going for it. But even value investors, who try to buy stocks on the cheap, are betting that a company will eventually start to do better, and the stock will catch up.

Betting on the brains behind the operation

Return on equity and return on capital are the best and quickest ways to figure out how well a company is managed. But many fundamental analysts dig even deeper by dissecting return on assets. Return on assets, by itself, is a helpful thing for fundamental analysts to consider. It tells you how much profit the company is generating from the assets it has under its control. Return on assets helps you see how well a company is running itself without any financial distortion caused by the use of debt.

But dissecting return on assets into parts can reveal even more about a company's management. To show you want I mean, first consider the formula for return on assets:

$$\text{Return on assets} = \text{Income} / \text{Assets}$$

Income, in the numerator of the formula above, means different things to different fundamental analysts. Some use net income, since it's easily obtained from the income statement. Yet others use earnings before interest and taxes, or EBIT, instead of net income to measure return on assets.

Return on assets broken into its component parts:

$$\text{Return on assets} = \text{Profit margin} \times \text{asset turnover}$$

And let's cut that formula down even further to say:

$$(\text{Income} / \text{assets}) = (\text{Income} / \text{revenue}) \times (\text{Revenue} / \text{assets})$$

What it's telling you is that a company's return on assets is a function of its profit margin and its asset turnover. A company's profit margin is how much it keeps in profit from every \$1 in sales. And the asset turnover is how much revenue a company earns from its assets.

Breaking down the return on assets clearly shows you the two levers a company can pull to boost its return on assets: **profit margins and asset turnover**.

When looking for stocks to buy, find those that are:

- ✓ **Boosting their profit margins:** Profit margins, however you measure them, are a key component to a company's future.
- ✓ **Putting their assets to full use:** The more revenue a company can generate from its assets, the better the returns.
- ✓ **Doing everything simultaneously:** Even a small improvement in profit margins and a modest improvement in asset use can have an explosive effect on a company's returns.

*When you flip the P-E ratio over, and look at the reciprocal, you get what's called the **earnings yield**.*

While the P-E gets all the attention, the earnings yield can also be easier to understand. The earnings yield tells you how much in earnings a company is generating for you.

The earnings yield is so useful because it puts the P-E into a form that is easily understood and compared with other investments. For instance, if you could get 8.5% in a savings account, then the 8.5% earnings yield from 3M wouldn't be all that attractive. You'll want to make sure the extra risk is worth it

Knowing When to Bail Out of a Stock

Knowing when to sell is tremendously important when you buy and sell individual stocks. When you buy individual stocks, as opposed to buying broad index funds, you're taking on company-specific risk

There are many reasons why a fundamental analyst might decide to part with a stock. Some of the major ones include:

- ✓ Decelerating earnings or revenue growth
- ✓ Deteriorating financial ratios
- ✓ Poor corporate governance or questionable management
- ✓ Overvaluation
- ✓ Rising risk of default
- ✓ Chronically missing expectations
- ✓ Your appetite for risk has changed

A good company's stock may turn out to be a bad investment if you overpay for it.

There are a few telltale signs that show too many investors are piling into a stock, perhaps making it overvalued and a candidate to be sold, including:

- ✓ **Inflated price-to-book ratio:** When you see a stock's price-to-book pull ahead of its industry peers, you might consider selling.
- ✓ **Lovely price-to-earnings ratio:** When a company's P-E gets high relative to the other stocks in the industry, you ought to be concerned and consider selling. Also, if the stock market's P-E is 15 and your stock's P-E is above 100, you might consider selling a bit.

Calculating the dividend yield

The dividend yield tells you how much cash you're getting in the form of dividends for every \$1 you've entrusted to the company. If the stock price were to remain flat and do nothing, the dividend yield would be your investment return. The formula for dividend yield looks like this:

$$\text{Dividend yield} = \text{Annual dividend} / \text{Share price}$$

Fundamental analysts measure the annual dividend in several different ways. Some add the actual dividends paid over the past year, while others annualize the current quarterly dividend, or convert the quarterly dividend into an annual one by multiplying by 4. When a company has recently cut its dividend, it's best to use the annualized current dividend.

$$\text{Dividend yield} = (\text{Current quarterly dividend} \times 4) / \text{Share price} \times 100$$

Knowing if you're going to get the dividend

There are several key dates to know about:

- ✓ **Ex-dividend date:** This is the date that you must already be a shareholder or buy the stock by in order to make sure you get the dividend.
- ✓ **Date of record:** This is the date that the company looks at its records to see who its shareholders are and determines who's getting the dough.
If you bought or own the stock by the ex-dividend date, you'll be on the list on the date of record.
- ✓ **Payable date:** This is the date you actually get your dividend.

There's no for-sure way to know whether a company will cut its dividend. However, there are some telltale signs. For instance, if you see a dividend yield creep dramatically above the average for the S&P 500, that can be a tip-off a cut could be on the way.

Fundamental analysts will often use some financial footwork, called a dividend payout ratio, to see how affordable a dividend is to the company paying it. The formula is:

$$\text{Dividend payout ratio} = \text{Annual dividend} / \text{Diluted earnings per share} * 100$$

For example, 23 cents of every \$1 in earnings are paid out as dividends. A 23% dividend payout ratio is reasonable, but you don't want to see it creep much higher than that since most companies need to retain some cash to reinvest in themselves.

Investors need to be very suspicious when a dividend payout ratio gets to 50% or higher. A dividend payout ratio that high might mean the company will not be able to increase the dividend or might have to cut it.

Some real-estate companies, including those structured as real-estate investment trusts or REITs, are required to pay out 90% of their earnings as a dividend. REITs are a special case, and the dividend payout ratios do not apply.

You can tell a great deal about a company by its dividend policy, or track record of either paying a dividend or not. When a company doesn't pay a dividend, for instance, it's telling shareholders it still has plenty of profitable ventures to plow its extra cash into.

Using a technique called the **constant dividend model**, you can get a rough idea of what a company's stock price should be based on the dividends the company pays. The formula looks like this:

$$\text{Value of a stock} = (\text{Next year's dividend}) / (\text{Required return} - \text{dividend growth rate}).$$

Also, the constant-dividend model only works on companies that pay a dividend. Many smaller or faster growing companies do not pay dividend. With those types of companies, you'll need to use the discounted cash-flow model.

Discounted Cash Flow

It's very difficult, if not virtually impossible, to know when a stock is over or undervalued until after the fact. Complicating things further, even if you're able to determine a stock is undervalued, other investors probably will too. And if they do, and buy the stock before you, they will push the price higher, and the stock will no longer be undervalued.

There are two main ways to look at what a stock is worth, including the:

✓ **Market value:** An investment's market value is what most investors primarily pay attention to. A stock's market value is the price investors have attached to a company. Market value is measured by multiplying a stock's price per share by its number of shares outstanding.

✓ **Intrinsic value:** A stock's intrinsic value is based on all the fundamental data you're been reading about so far in the book, namely earnings, cash flow and dividends. A stock's intrinsic value is based on how much money the company is expected to earn over its lifetime.

Warren Buffett is famous for paying close attention to a stock's intrinsic value before buying it. He's constantly searching for stocks that, for whatever reason, are trading at or below their intrinsic values. By buying a stock well below its intrinsic value, he gets a bit of a **margin of safety**, or a bit of protection if the stock price were to fall further.

There are several methods of calculating intrinsic value, but the DCF analysis is one of the top methods used by fundamental analysts.

A company's free cash flow is the amount of cash it throws off from its daily business, minus any cash it needs to spend on self-improvement, or capital expenditures.

All the information you need to calculate a company's free cash flow is available on the statement of cash flows. The formula for free cash flow looks like this:

$$\text{Free cash flow} = \text{Cash from operations} - \text{capital expenditures}$$

Being able to calculate a company's free cash flow is the first step in building a DCF analysis.

A discount in fundamental-analysis-speak is a way to describe the phenomenon that a dollar received in the future isn't worth as much as a dollar received today.

Since prices generally rise every year, a dollar won't buy as much in the future as it would today, known as its **present value**.

$$\text{Present value} = \text{Future value} / (1 + \text{interest rate})^{\text{time}}$$

To perform a discounted cash flow analysis, you'll need a few pieces of information:

- ✓ **Current free cash flow**
- ✓ **Number of shares outstanding**
- ✓ **Expected growth rate in the intermediate term:** You will need to estimate how rapidly a company's cash flow is likely to grow over the next five to 10 years. You can either estimate this yourself or get it from financial Web sites.
- ✓ **Expected perpetual growth rate:** Over time, most companies mature and start to grow at the pace of the economy. Over a company's very long term, this more moderate growth rate is assumed to continue into the future.
- ✓ **Discount rate:** This is how much return investors, in exchange for providing their cash to the company, expect to receive.

Estimating the company's intermediate-term growth

In this step, you'll need to start making some guesses. There are two main ways to estimate a company's future growth, including:

- ✓ **Historical trend analysis:** A company's historical growth rate is a good place to start when trying to see how fast it will grow in the future. If the company is in a pretty stable business, looking at its historical growth trends can be a good way to forecast the future.
- ✓ **Listening to the analysts' forecasts:** The second method of estimating a growth rate is by considering what analysts say. Most stock analysts' reports will provide an expected long-term growth rate. Many financial Web sites also provide an average of the analysts' earnings growth forecasts, which can be a good proxy for guesses at the company's future cash flow growth.

The difficulty in estimating expected future growth rates is a big reason why, as a fundamental analyst, you might stick with companies that sell products that have stable and steady growth. They are much easier to forecast growth for.

Forecasting long-term growth

Generally, fundamental analysts assume a company's growth over its lifetime will moderate to the economy's growth. Over time, that super-long-term-growth rate is about 3%.

Measuring the discount rate

Discount rate, sometimes called a company's cost of capital is what you'll use to measure the present value of the company's future cash flows. For our purposes, though, it's important to get in the ballpark for the discount rate calculation.

There are two primary ways to do this, including:

There are two primary ways to do this, including:

1. Taking a cue from bond investors

One way to estimate the discount rate is by taking the yield being paid on some of the company's bonds that mature in five years or longer. The yield is the return investors would get if they bought the bond at the current price. The current yield on thousands of companies' bonds are available for free at brokerage firms' Web sites.

Don't assume that a bond's yield is equal to the discount rate for a stock. After all, you're taking more risk buying a company's stock than a bond investor is taking, since you don't get a guaranteed return. As a result, you must add anywhere between one to three percentage points to arrive at a discount rate. In this example, you might assume the discount rate to be 7%. The riskier the company, the more you'll want to add to this yield.

2. Using the Capital Asset Pricing Model (CAPM)

Capital Asset Pricing Model, or CAPM formula states a company's discount rate should be relative to the risk taken by investors and what return they could get for taking no risk. The formula looks like this:

$$\text{CAPM discount rate} = \text{risk free rate} + (\text{expected market return} - \text{risk free-rate}) \times \text{stock's beta}$$

✓ **Risk-free rate:** This is the return you'd get for taking very little risk with your money. Generally, this is the yield on U.S. securities maturing in 10 years. This yield is available on nearly any financial Website.

✓ **Expected market return:** This is the return investors generally expect from investing in stocks. Generally, investors use the stock market's long-term return of 10% as a reasonable long-term expectation.

If you don't like using the 10% long-term average, you can consider measuring the expected market return by adding the dividend yield to the earnings yield.

✓ **Stock's beta:** Some stocks are riskier than others. Beta is a statistical tool used to quantify how risky a stock is relative to the market. When a stock's beta is greater than 1, the stock is considered to be riskier, or more volatile, than the market. When a stock's beta is less than 1, it's thought to be less risky. You can get stocks' betas from nearly all financial Web sites.

Full-fledged DCM

The primary objective is to estimate a company's future cash flows and then figure out what those cash flows would be worth today.

Forecasting the cash flows for the first five years

All you need is the company's free cash flow from the just-completed year and its expected growth rate. To estimate what the following year's free cash flow might be, multiply the previous year's figure by 10%, or simply by 1.1. And for year two, just repeat. Keep repeating this procedure for five years.

Forecasting the cash flows for years five and beyond

Another formula will bail us out and help us figure out how much the company is expected to earn in perpetuity, known as its **residual value**. The formula looks like this:

$$\text{Residual Value} = \text{Cash flow in year 5} \times (1 + \text{long-term growth rate}) / (\text{Discount rate} - \text{long-term growth rate})$$

Discounting all the cash flows to current value

At this point, you've estimated how much cash the company is expected to generate in its lifetime. Those cash flows will be received in the future. And as you discovered above, a cash flow received in the future is worth less than one received now.

Discount the future cash flows using the discount rate.

$$\text{Present value} = \text{Future value} / (1 + \text{interest rate})^{\text{time}}$$

Be sure to calculate the present value of all five of the years. And when you're done with that, don't forget to calculate the present value of the residual value. When you calculate the present value of the residual year, in this example, it's considered to be in year five.

Finally, you add up all the present values to arrive at the intrinsic value. This number can then be compared with the market value to see whether the stock is cheap or expensive based on intrinsic value.

Comparing intrinsic value to market value

compare the stock's intrinsic value to the current stock price.

Table 11-3	Sizing Up Intrinsic Value
If a stock's intrinsic value is the stock may be ...
Greater than the current stock price	Undervalued
Less than the current stock price	Overvalued

Don't assume that just because a stock looks undervalued using the DCF analysis, you should run out and buy it. The DCF analysis is highly reliant on the multiple assumptions and estimates you've made. Fundamental analysts use the DCF analysis as one of many tools before deciding whether or not to buy a stock.

If you'd like to practice doing another DCF analysis and read through another explanation, I've made one available here: http://www.usatoday.com/money/perfi/columnist/krantz/2005-06-29-cash-flow_x.htm.

Web sites to help you do a DCF without all the math

- ✓ Moneychimp's Cash Flow Calculator (www.Moneychimp.com/articles/valuation)
- ✓ Valuation Technologies' Discounted Cash Flow (www.Valtechs.com/r2.shtml)
- ✓ Newconstructs.com (www.newconstructs.com)

The annual report to shareholders and the closely related official annual report called the 10-K, for many fundamental analysts, are the single most important documents a company provides to investors all year.

Getting your hands on the 10-K

- ✓ Downloading from the Securities and Exchange Commission
- ✓ Downloading from the company
- ✓ Requesting a paper copy from the company

Dissecting the main sections of the annual report

Business

The company describes in excruciating detail exactly what it sells, where it sells, and how it makes money.

Understanding the specifics of a company's business model is critical to fundamental analysis. For instance, since Coke doesn't actually bottle many of its beverages, a fundamental analyst might be careful before comparing the company with another beverage company that does its own bottling. The bottling businesses require large investments in machines and trucks, which tend to be less profitable than selling concentrate. And speaking of competitors, in the 10-K's business section, companies will usually spell out all the companies they deem to be their rivals. This list of rivals is very helpful for fundamental analysts, since it's a list of comparables, or other companies to benchmark against each other.

Companies will also state, in the business section, who their key suppliers are. Fundamental analysts pay attention to suppliers, checking to make sure they're sound and able to keep providing materials the company needs. Also, sometimes it can be a better idea to invest in a company's suppliers than in the company itself. Since the suppliers aren't as well-known, they might have a lower valuation than the company itself.

Risk factors

Companies must clearly spell out everything that possibly could go wrong. Ignoring the risk factors in companies' 10-Ks can be a big mistake.

Unresolved staff comments

If the SEC has a problem with any way the company handles its accounting, you'll see the details described here.

Make sure this part of the 10-K is blank. If the SEC disagrees with a company's books, you should probably find another stock to invest in.

Properties

Here you'll get a rundown of all the major property the company owns and where it's located.

Legal proceedings

All the lawsuits that are pending against the company and the company's own estimate of the odds of winning or losing.

Executive officers - all top executives of the company

Market for registrant's common equity

Companies generally provide a chart showing how high and low their stock price got in each quarter of the year, and the value of dividends paid. The company also provides an estimate of how many investors own the stock.

Some companies even tell you how many shares of their own stock they issued, or bought back. Information on stock buybacks is extremely valuable, since you can find out whether a company is using its cash on the bet that its stock will rise.

Sometimes, investors need to find out a stock's price after it no longer trades. For instance, a stock you own may have been acquired, or bought, by a rival. After a company is bought, you can no longer look up its stock price on most investing Web sites because it no longer actively trades. The Market for Registrant's Common Equity section of the 10-K can help you get a ballpark estimate of a stock's value in the past.

Selected financial data

Management's discussion and analysis

Often called the MD&A. When a business development is called "challenging" in the MD&A, that's a clue to fundamental analysts to dig deeper.

Quantitative and qualitative disclosures about market risk

Some companies sell a great deal of product in foreign countries. That means these companies may be exposed to the risk of falling overseas currencies, which could hurt the bottom line when the profits are brought back home and converted into dollars.

Financial statements and supplementary data

Changes in and disagreements with accountants

If a company and its accounting firm has a, shall I say, difference in opinion over the financials, you'll find it here. As a fundamental analyst, you want to see this part of the 10-K blank, and it usually is.

Controls and procedures

Companies are required to have safeguards in place to stop fraud from even occurring.

***. A company, many months or years after reporting revenue and earnings, to tell shareholders the numbers are wrong and need to be changed. When this happens, it's called a **restatement**.

Corporate governance

A placeholder for things you can find the in the proxy statement.

Exhibits and financial statement schedules

Interesting items to look for here include the juicy employment contracts given to top executives.

Executive sign-off

Auditor opinion

The company's accounting firm is required to give the company the Good Housekeeping Seal of Approval, or not.

Things you should be looking for in the annual report :

-- Many start reading the annual report near the bottom with the **footnotes**. By reading the footnotes before reading anything else, you can quickly find out about all the unusual items going on at the company. It's usually the unusual items that might have the most sway over your final opinion on a company's future or health. When reading the footnotes, you'll want to pay special attention to areas described in the sections that follow.

-- Assets and liabilities that aren't on the balance sheet

Companies are allowed to keep certain assets or liabilities off the balance sheet.

SIDE NOTE : Credit Default Swaps, or CDS. CDS are extremely complicated financial instruments that are essentially insurance policies to protect investors from bum investments. Just as an insurance policy protects a homeowner from a loss from fire, a CDS would protect an investor, say, if a borrower couldn't pay back a loan

-- Understanding pension liabilities

The size of the pension obligations are disclosed in companies' footnotes. Pension costs can take a big bite out of profit remaining for shareholders. When a company's pension is underfunded, for instance, it is required to divert some of its profit to fund its pension plan. Not only can big pension shortfalls eat into a company's profits, they can also cut into how much a company can afford to invest in new products, which may dent future growth.

-- Changes to accounting and inventory

It's also a good idea to compare a company's accounting treatment with other companies in the same industry. Watch out when a company uses accounting methods that make its earnings look better.

Be extremely suspicious if you see that a company changes the way that it accounts for inventory. First in, first out, or FIFO, allows the company to consider the oldest goods in its warehouses to be the ones it sold first. In a period of rising prices, the oldest goods will have been the cheapest, so the company's cost of goods sold under FIFO will be lower, and profits higher.

Under LIFO, or last in, first out, companies consider that the newest inventory is sold. When prices are rising, LIFO tends to decrease profits. Be suspicious when a company voluntarily switches from LIFO to FIFO, since that's a quick and easy way to artificially boost the bottom line.

-- Debt repayment timeline

A key part of fundamental analysis is understanding whether a company has borrowed too much. And an important part of assessing this is knowing when a company's debt matures, or is due. When a company's debt matures, suddenly it must either pay off the debt with cash, or refinance, by replacing the debt with a new loan at the higher current interest rates.

-- Effects of tax rates

Companies must state what their actual effective tax rate was and why it differed from the standard 35% tax rate. Typically, the effective tax rate might be decreased if a company does a large portion of its business in countries with lower tax rates.

It's possible for companies to artificially boost their earnings by using a lower tax rate than investors are expecting. Fundamental analysts, too, should pay attention if the result a company's tax rate is lower is due to a temporary reason, such as a short-term tax incentive to open a plant in a certain country.

A few of the things you should be looking for in the MD&A include the:

- Forward-looking information
- An examination of the real risks
- Comparing a company's promises with reality : Always have last year's annual report handy when reading this year's. By comparing the two reports side-by-side, a fundamental analyst might pick up some interesting information about how well a company executes on its promises.

When you see a company making changes to financial data that appeared in the 10-K, you need to pay close attention. As a fundamental analyst you want to be sure you understand why the changes were made, how significant the changes are and whether the modifications indicate any more serious issues at the company. Most importantly, you want to get an idea of whether or not the company may have padded financial results in order to make itself look good and keep its stock price moving higher.

When a company and its auditors disagree in large degree, the squabble must be disclosed in the *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure* section. For an auditor to disagree to the point of putting the dirty laundry into a public filing, it must be a pretty big deal.

Keep a watchful eye if a company abruptly announces it's replacing its auditor. Some companies, which disagree with their auditor, go auditor shopping and try to find an accounting firm that's willing to sign off on the books. Replacing an auditor before the 10-K is put out helps a company get a clean audit opinion. Companies are required to file a Form 8-K stating they've replaced the auditor and whether or not there was a disagreement at the time.

You will find the board's verdict on internal controls in the Controls and Procedures section of the 10-K. And many times, the auditing firm will attach a separate page called the Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting.

Report of Independent Registered Public Accounting Firm section of the 10-K, is critical for fundamental analysis.

In this section, the auditing firm will say it gives its blessing to the books, usually using wording like "fairly represent the financial position" of the company. Always scan the audit opinion for the words **going concern**. So when an accounting firm has doubts a company may continue as a "going concern," that's a **gigantic red flag** to fundamental analysts that investing in this company is highly speculative.

Analyzing a Company's Public Comments and Statements

There are times, though, when members of a company's management team speak to investors. The most substantive meeting top-level executives have with investors is typically during analyst conference calls at the end of each quarter. There's also the shareholders' meeting, an annual gathering of a company's executives and investors. These meetings are mostly marketing events.

Analyst Conference Call : The company sets up a telephone call for Wall Street analysts, who cover the stock, to call in and listen to a discussion about how the quarter went.

Purpose of analyst conference calls

- ✓ Discuss and summarize the company's performance during the quarter.
- ✓ Field questions from Wall Street analysts.
- ✓ Provide future guidance. One of the most widely watched aspects of the analyst conference call is whether the company will indicate what it expects to happen in the immediate future. This tip-off to what the company thinks is likely for future financial results is called guidance.

*** Many companies have a pretty good idea of what their book of business, or expected deals with customers, will look like months in advance. And that's why when CEOs give guidance, they might not be taking as much of a leap as you'd think. Some CEOs, too, might give guidance they think will be easy to beat. That way, even if the quarter was just as expected, investors might view the financial results as better-than-expected and buy the stock.

Unique things to look for in analyst conference calls

During a conference call, you'll want to make sure the management team adequately steps through and describes the just-completed quarter's results. That's really the most basic reason for the call. But as a fundamental analyst, some of the others things you should watch for in the analyst conference call include the:

✓ **Tone of the executives:** Be on the lookout for CEOs and top management who act like it's their company instead of the investors'. One warning sign that a management team doesn't understand it's beholden to the public is if executives act agitated when answering questions from analysts or investors.

✓ **Lack of availability:** While nearly all companies conduct an analyst conference call, they are not required to do so by regulators. *Transparency* is an industry term to describe how forthcoming a company is with its financial information.

✓ **Completeness of answers:** If you start noticing the management team is constantly deflecting questions, refusing to answer queries or providing very canned answers, your fundamental analysis radar should start flashing.

Most companies make their analyst conference calls available to all shareholders in a variety of ways including:

- ✓ Dial-in numbers
- ✓ Web-streams of calls
- ✓ Transcripts and FAQ

Be highly skeptical when a company decides to release its earnings after the market closes on Friday. It's highly unusual do to this, since it leaves investors all weekend unable to buy or sell the stock during normal stock market hours. Generally, companies with very bad news try to slip it through late Friday and hope, I guess, that investors won't notice.

If you're not sure whether what's being discussed on the analyst conference call is good or bad, always check after-hours trading. Most financial Web sites will show you how the stock is behaving in special electronic trading that occurs after the stock market exchanges close at 4 p.m. But don't think you need to start trading after hours yourself. Since the amount of stock being traded after hours is much lighter than during the regular hours, you might end up paying more for a stock you're buying or getting less for a stock you're selling than you would if you'd waited.

Getting a complete understanding of a company and its stock's valuation requires digging through many documents, looking for trends, discrepancies, and other anomalies. Rather than reading everything, much of which is duplicative, fundamental analysts use the media to zero in on developments such as:

✓ **New products:** One of the most difficult factors for fundamental analysts to deal with is a company's new products. Media reports can help by offering comments from industry experts who can put the new products into perspective.

✓ **Bad news:** Good financial journalism, though, will help you look past the corporate spin and get a good grip on when a company's woes are alarming.

✓ **Availability (or over-availability)** : Some companies' CEOs are constantly in the press while others' never are. When you notice CEOs seem to be on TV a couple times a week, you really need to wonder why they feel so inclined to be constantly telling their story. But at the same time, you might wonder if an executive is being overly secretive, too.

*** If trading is light in the stock, meaning there aren't many buyers and sellers, a stock's price can be fairly easily manipulated by seemingly positive press releases.

Annual shareholder meetings often follow a script like this:

- ✓ Flashy introduction
- ✓ Presentations from company management
- ✓ Shareholder question-and-answer period

With that said, though, part of the job of fundamental analysts is to survey the financial landscape for any information that might affect the value of a company or change its future prospects. And that's where it can be worthwhile to look into the fundamental research done by others. Fundamental analysis from Wall Street brokerage firms and credit-rating agencies can provide details that you might have missed in your own work. Similarly it can be helpful to find out which other investors are buying a stock you're interested in and what they're saying about it.

Some of the reasons why you might want to take a look at analyst reports include:

- ✓ A way to double-check your own analysis
- ✓ Industry insight
- ✓ Dissenting point of view: If you're convinced a stock is a screaming buy, it might make sense to seek out analyst reports that are less bullish on that stock. Perhaps the bearish analyst will point out things you didn't notice in your own analysis.

Research reports are put into one of two categories based on their source, including:

Broker research

Research generated by the analysts at large brokerage firms, such as Bank of America, Citigroup, Goldman Sachs, and UBS. If a brokerage firm were to put out negative research on a company, it could risk upsetting management and jeopardize the future investment banking business. If a company only gives out buy ratings, you know to take a double dose of salt when reading that firm's reports.

Independent research

Independent research is considered to be analysis that comes from a firm that doesn't have an investment banking unit. Independent research often comes from boutique research firms, which may be operated by one analyst or a team of analysts who may have specific experience, such as a particular industry or type of fundamental analysis. Other independent research comes from quantitative research firms, which create automated computer programs to study different stocks using a series of tests.

Some of the key pieces of data you should be on the lookout for in an analyst report include:

- ✓ Savvy comparisons of a company to its peers
- ✓ Deep analysis of demand for a company's products: The better analysts perform what are called channel checks. In a channel check, an analyst will call up a company's customers and suppliers to see how well a particular product is flowing through the distribution channel. Analysts might find out, for instance, that retailers are slashing prices on a company's products just to clear them off the shelves. That's not a good sign. On the contrary, a supplier might say a company is ordering a great deal of raw materials, which could indicate the company is ramping up production.
- ✓ Forecast for long-term growth
- ✓ Exploration of a stock's valuation

*** A vast majority of the stock reports from S&P provide the stock's discount rate and terminal growth rate. The discount rate is the rate of return investors demand in exchange for putting their money at risk by giving it to the company. And the terminal growth rate is how much the company's earnings and cash flow are expected to grow in the very long term. Both can have a major effect on the results of the DCF analysis.

Credit-rating agencies, including Moody's, Standard & Poor's and Fitch Ratings, look at companies very differently than stock analysts do. The role of the credit-rating agencies is to assess how capable companies are of repaying the money they've borrowed by selling bonds.

Some of the aspects of credit-rating agencies' reports that might be especially valuable include:

✓ **The credit rating:** The credit-rating agencies assign various letter grades to companies. These letter grades attempt to give investors a quick way to determine how likely it is for a company to repay its debt, or, on the contrary, to default or miss an interest payment. Since the credit-rating agencies are paid by the companies to provide their ratings, there's long been suspicion that credit ratings give companies a great deal of leeway. It's the analysis behind the rating, instead of just the rating itself, that has the most value for fundamental analysts.

✓ Analysis of how much and how often the company is borrowing

✓ **Risk assessment:** While companies themselves pinpoint the risks facing their businesses in their annual reports, it's often better to get this information from a credit-rating agency report. Bond investors are a pretty nervous bunch, since they're petrified of not getting their money back. As a result, credit-rating agencies spend a great deal of time investigating things that could go wrong at a company instead of what could go right.

some online resources that will help you get what you need from the reports, including the:

✓ Credit-rating agencies' sites: Both Moody's site, www.moodys.com and S&P's site, www.standardandpoors.com will let you look up the rating on most stocks for free.

✓ Media reports

Knowing when a company's credit rating is suspect

If the prices on a company's bonds are dramatically lower than those on debt issued by companies with the same credit ratings, fundamental analysts know investors think the company's credit rating is too high.

If you're investing in a company's stock, why should you care if its debt rating is too high? If a credit-rating agency ultimately decides to lower the credit rating on a company, or downgrade it, that could potentially increase the company's borrowing costs in the future. And higher borrowing costs could increase a company's interest expense and decrease its net profit in the future.

To find out whether investors trust a credit rating is by using Moody's own site. The first line, called Moody's Senior Unsecured or Equiv, will show you the official credit rating from Moody's. Below the line with the official credit rating, you'll see a line called bond-implied. This line tells you what bond investors think the company's debt should be rated, based on the current price. Next, check out the "Equity-Implied" line. This line tells you what stock investors think the company's credit rating should be

*** Social investing is the financial version of social networking sites

A few types of stock message boards and social networking sites to consider include:

✓ **Stock message boards:** The more popular stock message boards include those hosted by Yahoo Finance (finance.yahoo.com), Raging Bull (ragingbull.quote.com) and Silicon Investor (siliconinvestor.com). Again, these stock message boards are filled with misinformation, so it's caveat emptor.

✓ **Broker-operated sites:** Online discount brokerages TradeKing and Zecco.com are some of the leaders in allowing their members to share investing ideas with each other. What these sites offer, which make them more credible than stock message boards, is that you can see the actual holdings of the members

Finding out who a company's biggest investors are. Some companies list all the investors who have the biggest stakes in their companies in their 10-K, or annual report filing that's required by regulators. Others may include the information in their proxy statement. If nothing turns up, it's time to find out about a regulatory filing called a 13F-HR. Large institutional investors are required to file 13F-HR filings when they take significant stakes of publicly traded firms.

NOTE: Investment research company Morningstar makes it very easy to look up who the biggest owners of a stock are, as well as the largest investments by big money managers.

To look up the largest owners of a stock, log onto Morningstar.com, enter the stock symbol of the company you're interested in and click the Go button. On the left-hand side of the screen, click the Insider Trading option. Finally, click on the Concentrated Fund Owners tab at the top of the list to get details on the biggest owners of a stock.

What if you want to find out what your favorite mutual fund manager owns? It's the same basic procedure. Just enter the name of the mutual fund or enter the fund's symbol at Morningstar.com and click the Go button. Next, click on the "Portfolio" option on the left-hand side of the screen. Lastly, click on the "Top 25 Holdings tab" at the top of the screen.

Performing "Top Down" Fundamental Analysis

Understanding the ups and downs of the economy, and the resulting business cycle, is what's known as top-down analysis. And top-down analysis is a critical adjunct to fundamental analysis, helping you make sure you're investing in the right companies for the right price at a good time. Investors who practice fundamental analysis are attempting to find those companies that stand to benefit the most given the current economic environment.

It's critical to recognize that changes in the economy may have big effects on companies and dramatically alter your fundamental analysis. A large economic downturn, for instance, can cause a company's revenue and earnings to plummet, turning all your expectations for the company upside down.

When the economy slows down, and consumers and companies cut how much stuff they buy, companies' financial statements take a direct hit. Less spending by consumers and businesses translates directly into less revenue and earnings for companies. And revenue and earnings are precisely the things that fundamental analysts spend their time looking at.

The economy can have big-time effects on business, especially in regard to a company's:

✓ **Ability to service its debt** : If the economy causes net income to fall, what had been a manageable level of debt might become pretty difficult to handle going forward.

✓ **Capacity to borrow** : The unavailability of capital caused many companies to have to finance, or pay for, their expenses and needed improvements out of their cash balances. During severe economic contractions, the companies with access to large sums of cash are often able to make moves to improve their position when the economy ultimately heals. Some companies, for instance, may use their cash to buy weaker competitors, giving them greater market share when the economy improves.

✓ **Cost structure** : Companies, which are capital intensive or reliant on large and expensive facilities, may have a more difficult time reducing their overhead costs. Closing a plant or facility may take longer than just giving a bunch of workers pink slips.

✓ **Reliance on a strong economy** : Some industries are more subject to the health of the economy. For instance, companies that make durable consumer goods such as homes, appliances and automobiles, usually see the largest drop-off in business as spending on such big-ticket items cools. Companies with profits that are closely tied to the economy are described as being cyclical.

Another factor you need to be aware of when it comes to incorporating the economy's health into fundamental analysis: **interest rates**. Why do stocks often jump when the Federal Reserve, or the nation's central bank, reduces short-term interest rates? If the reduction in short-term interest rates, or the rates banks usually charge each other to borrow money overnight, prompts interest rates on longer-term loans to fall, that can affect how much companies are worth.

Most people assume lower interest rates are good for stocks because the companies can borrow money at a more affordable rate. And that is true. Lower interest rates may reduce a company's interest expense, and boost profit. Companies might also borrow more money to expand their operations or build new stores, which might increase future profits.

Booms are inevitably followed by busts. After things get so bad, smart companies and entrepreneurs inevitably launch new ideas, and the economy gets going again before it overheats all over. This constant boom-to-bust is characteristic of the capitalist system, and is called the **business cycle**.

Fundamental analysts generally break the business cycle down into five primary phases:

- ✓ **Expansion:** At this point, the economy is starting to pick up steam. Economic activity is heating up, perhaps following a recession, and sometimes powered by lower interest rates.
- ✓ **Peak:** The economy is running at full tilt. Hotels and airplanes are full. Companies are pumping out as much product as they can handle.
- ✓ **Contraction:** Business activity begins to slow from the unsustainable peak levels, due to some negative event. Companies begin slashing costs, often by laying off workers.
- ✓ **Trough:** When it seems like there's bad news about the economy and things are only getting worse, the economy may have hit rock bottom.
- ✓ **Recovery:** Eventually, demand hits bottom, and consumers and businesses start spending. Improved demand for products allows companies to hire back workers and increase production. And so the cycle starts all over again.

The National Bureau of Economic Research, or NBER is a private and nonprofit organization, founded in 1920, that researches the health of the economy. One of the NBER's roles is to officially pronounce when a recession begins and ends. One of the biggest criticisms is that the NBER doesn't officially pronounce the beginning of a recession until the economy has been contracting for some time.

Some of the important measures of economic activity, or economic indicators, you'll want to be aware of.

- ✓ **Gross domestic product, or GDP:** GDP is arguably the most popular measure of a country's economy. GDP measures how much action an economy has going on by tallying up the amount of consumption, investment, government spending and difference between exports and imports within a nation's borders.
- ✓ **Inflation:** If inflation starts rising uncontrollably, the Federal Reserve may need to increase short-term interest rates to slow down demand, which could hurt the value of companies.
Key measures of inflation include the Consumer Price Index, Producer Price Index, and wages. Those measures track how much prices of consumer goods, industrial goods, and employee wages are rising. Deflation occurs when prices fall.
- ✓ **Interest rates**
- ✓ **Regional economic activity**

Nearly all economic indicators are backward-looking, meaning that they reflect what has happened, rather than what is likely to happen in the future.

Paying attention to the Conference Board Leading Economic Index

The Conference Board Leading Economic Index attempts to give everyone a way to see what's hurting the economy and whether or not things are getting better or worse. The indicator gets a forward-looking read on the economy by examining the following 10 factors:

- ✓ **Real money supply:** The number of dollars in the economic system ready to be lent and spent. Money supply is kind of like the lubrication of the economy. Money supply serves the same role as motor oil in a car engine.
- ✓ **Interest-rate spread:** This measures how costly it is to borrow money. When consumers and businesses can borrow at an affordable rate, economic activity tends to pick up.
- ✓ **Consumer expectations:** When consumers are worried about their jobs and financial futures, they cut their spending. That slows down the economy.
- ✓ **Manufacturers' new orders for nondefense capital goods:** If companies are feeling better about the future, they may purchase new equipment and plan to expand.
- ✓ **Manufacturers' new orders for consumer goods and materials:** Companies ramping up production need to buy more ingredients to feed into their factories.
- ✓ **Average weekly initial claims for unemployment:** Companies slash jobs when they don't see economic activity getting better. Plus, more people out of work means fewer consumers to buy goods and services.
- ✓ **Building permits:** Companies must get permits to construct new properties, so a slowdown in permits indicates a less bullish view of the future.
- ✓ **Average weekly manufacturing hours:** Large manufacturers may ask workers to cut back their hours if they need to trim costs or have employees work overtime if they expect a boom in demand.
- ✓ **Stock prices:** Investors will generally start buying stocks if they expect the economy to recover within six months or so. Watching the stock market's moves is such a valuable, early predictor of economic cycles.
- ✓ **Index of supplier deliveries:** One of the first things companies do when they expect things to get better is place orders with their vendors.

The Conference Board makes its Leading Economic Index available for free, as a press release, here: <http://www.conference-board.org/economics/bci>.

If you're looking for an early tip-off to when the economy is either headed for the toilet or about to improve, it's tough to beat the stock market. Since investors are always looking to the future, traditionally, the stock market will signal roughly three to six months ahead of time, in what direction the economy will head.

How a Company's Industry Can Influence Its Value

You want to be aware when a company you're investing in might be threatened by a game-changing company or new technology. Almost overnight, all the revenue and earnings on the financial statements might not be meaningful if the business model, or way the company makes its money, is turned upside down.

The constant assault against established industries is part of our capitalist system. **Global Industry Classification Standard, or GICS** puts companies into their places. GICS puts every industry into a sector, industry group, industry and sub-industry. GICS was co-created by Standard & Poor's and MSCI Barra, two companies that specialize in creating ways to classify companies.

Once you see what sector a company is in, you can then see which industry group, industry and sub-industry it's in. Ford falls into the Consumer Discretionary sector, which contains all sorts of industry groups that make big-ticket items consumers buy, such as consumer durables. It also goes into the Automobiles & Components industry group, which contains the auto components and automaking industries. Next, Ford fits into the Automobiles industry, which includes two sub-industries: automobile manufacturers and motorcycle manufacturers. And Ford makes cars and trucks, so it goes into the Automobile Manufacturers sub-industry.

Table 16-2 A Small Piece of the GICS Puzzle

Sector	Industry group	Industry	Sub-industry
Energy	Energy	Energy equipment and services	Oil and gas drilling
		Oil, gas, and consumable fuels	Integrated oil and gas
Materials	Materials	Chemicals	Commodity chemicals
		Containers and packaging	Metal and glass containers
Industrials	Capital goods	Aerospace and defense	Aerospace and defense
	Transportation	Road and rail	Railroads
Consumer discretionary	Automobiles and components	Automobiles	Automobile manufacturers
			Motorcycle manufacturers

Sector	Industry group	Industry	Sub-industry
Consumer staples	Food, beverage & tobacco	Beverages	Brewers
Health care	Health care equipment & services	Health care equipment & supplies	Health care equipment
	Pharmaceuticals, biotechnology & life sciences	Biotechnology	Biotechnology
Financials	Banks	Commercial banks	Diversified banks
	Insurance	Insurance	Insurance brokers
Information technology	Software & services	Software	Application software
Telecom-communication services	Telecommunication services	Diversified tele-communication services	Wireless tele-communication services
Utilities	Utilities	Electric utilities	Electric utilities

Some sectors, for instance, tend to see their business rise and fall along with the economy. These are called cyclical companies, and includes industries such as the automakers. Then there are sectors that tend to be noncyclical, meaning that their performance tends to not be all that connected to the economy's shape. The health care industry is a good example of a sector that's usually noncyclical. By paying attention to which industries (or sectors) are posting the best results, or the strongest stock prices, you can get a hint as to where the economy is headed.

Table 16-3 Using Sectors to Monitor the Economy

During this point in the business cycle...	... This Sector Starts to Outperform
Early expansion	Consumer discretionary
Early peak	Materials
Late peak	Industrials
Late expansion	Energy
Early contraction	Health care
Early trough	Consumer staples
Late trough	Utilities and financials
Late contraction	Information technology

It's much easier to get fundamental data on sectors from companies that track these types of things very closely. S&P is one of the companies with massive databases dedicated to tracking all the earnings reported by companies and compiling them into a resource you, as a fundamental analyst, may use. All the earnings for the companies in all 10 sectors are compiled and provided to you here:
http://www2.standardandpoors.com/portal/site/sp/en/us/page.topic/indices_500/2,3,2,2,0,0,0,0,0,0,6,0,0,0,0,0.html.

When evaluating the profit and growth of individual companies, it's a good idea to compare the results to that of the sector. When you start to see stocks in a sector rising or falling, for instance, that tells you investors think the sector's fundamentals will follow.

There are a few sources that provide helpful industry performance data, including:

- ✓ **Summary of how the sectors have done over time:** Standard & Poor's provides the performance of all 10 of its sector indexes on a daily, monthly, quarterly and year-to-date basis. You can download the data into a spreadsheet for further analysis. The data are available here: http://www2.standardandpoors.com/portal/site/sp/en/us/page.topic/indices_500/2,3,2,2,0,0,0,0,0,0,6,0,0,0,0,0.html.
- ✓ **Up-to-date daily industry information:** Yahoo Finance provides an industry analysis page that shows you which industries are doing the best or worst during a trading day. The data are available here: <http://biz.yahoo.com/ic/>
- ✓ **Graphical view of industry group data:** If you're looking for an easy way to see which industry groups are leading or lagging over time, USA TODAY provides a large informational graphic every Monday.

Using exchange-traded funds to monitor sectors and industries

Exchange-traded funds, or ETFs, are one of the more exciting things to happen to the investment business. Investors who want to invest in a basket of stocks, for instance, can buy just one ETF and spread their money over dozens, hundreds or even thousands of individual stocks.

Table 16-5 ETFs That Let You Analyze the 10 Sectors

S&P Sector	ETF symbol
Consumer discretionary	XLY
Consumer staples	XLP
Energy	XLE
Financials	XLF
Health care	XLV
Industrials	XLI
Information technology	XLK
Materials	XLB
Telecommunications	TTH
Utilities	XLU

Sometimes it's not good enough for a company to post strong revenue, earnings and cash flow. If the rest of the industry is doing just as well or better, even a seemingly out-standing performance by a company may not be impressive. Companies cannot be analyzed in isolation, but rather, relative to their peers.

Sizing up a company's financials relative to its industry's

Whenever you look up a piece of financial data, the first thing that should pop into your head as a fundamental analyst is "what does this mean?" Generally, no single piece of financial data is meaningful by itself. Traditionally, fundamental analysis requires you to either compare a company's financial data with its historical results or against other companies in the sector or industry.

After you measure a stock's P-E, you can then compare the P-E against the valuation of the industry or the stock market to get an idea of how richly valued a stock is.

One way to verify a company's efficiency is by comparing its inventory turnover in days, or how rapidly a company clears out inventory from its warehouses, to the industry. A more efficient production system would have a rapid turnover, so the inventory turnover in days should be a small number. The formula is:

$$\text{Inventory turnover in days} = \frac{\text{Average inventory}}{\text{cost of goods sold}} * 365$$

Thomson Reuters provides industry data for you at www.reuters.com/finance/stocks. All you need to do is enter the stock symbol of the company you're studying, select the Ratios button and click the Go! button.

Sometimes you need to convert industry ratios generated by systems like Thomson Reuters to match your calculation method. For instance, Thomson Reuters doesn't convert inventory turnover in days, as I did above. For the computer hardware industry, Thomson Reuters gives a turnover rate of 10.69 for the industry. To convert that into inventory turnover in days, just divide 360 by 10.69 to convert the industry number into days.

Some industries might have unique characteristics, which requires additional analysis. Companies in the financial sector are an excellent example of how industry analysis may need to be tweaked to handle different industries. Most of the traditional free cash flow measures and cash burn techniques. Just don't apply to financials. Banks and brokerages, often, have cash on deposit from their customers. That cash cannot be used to fund operations.

Industry-specific financial measures can help you better analyze some of the oddities of certain industries. Many financial analysts know to truly see how strong a bank is financially, they must examine both its Tier 1 and Tier 2 capital. Tier 1 is considered to be a much more reliable measure of financial staying power than Tier 2 capital. Banks must disclose how much Tier 1 and Tier 2 capital they have, but getting that information requires digging into the footnotes to the financial statements.

Fundamental analysts who specialized on financial companies also study industry-specific measures such as a bank's level of loans that are 90 days past due, loans that have been completely written off, and the level of reserves a bank has taken to cover loans if they go bad.

Much of fundamental analysis dwells on the end result. You assess a company's bottom line and see how many assets and liabilities it ends up with after selling goods and services to customers. But industry analysis encourages you to examine a company, almost the way the executives running the firm would. And that includes paying attention to how much a company must pay for its raw materials. The amount of money a company spends to buy raw materials used to make products is considered a direct cost, and is included in its cost of goods sold, or COGS. The more a company pays for raw materials, the higher its COGS, and the lower its profit. If you see the prices of raw ingredients rising, that might be a tip-off a company or industry that buys those ingredients might see its future profits fall.

Remember, just because the prices of a commodity a company relies on is rising doesn't mean profits will take a hit immediately. Many companies use hedging, or complex financial instruments that let them lock in raw material prices for many months, or even years.

Market share analysis demonstrates the counterintuitive fact that a company may be able to increase profit, even in a tough economic environment, if it's able to steal business from rivals. Using total revenue to measure a company's market share is kind of a blunt financial analysis instrument. Companies may generate revenue from many different businesses.

Part of what you're trying to do, as a fundamental analyst, is to understand what a company's future might look like. You're not poring through all of a company's financial statements because you enjoy it. Companies that experience high profitability and have large barriers to entry are often able to protect themselves against the ravages of competition and deliver solid results to investors over time. Fundamental analysts who track a company's long-term record, or trend, can then get a decent estimate of what the future might hold. Trend analysis, therefore, can be a key part of fundamental analysis.

Businesses that are very difficult, or very costly, to start up from scratch are said to have high barriers to entry. Barriers to entry might also be the regulatory hurdles that must be cleared before a new company can get into business. Another barrier might be the existence of a company in the field with a dominant brand name or technology. Companies that enjoy barriers to entry tend to have financials that are more stable and predictable, since competition is less of a threat.

If a company reports a bad quarter, for instance, some investors might rush to conclusions and assume it's game over for the company, and its profits are about to go into free fall. Trend analysis can save you from myopic and short-term thinking.

$$\text{CAGR} = (\text{Last amount} / \text{starting amount}) ^ {(1 / \text{number of years})}$$

- ✓ **Last amount:** This is the financial result for the latest year that you're studying. For Oracle, this is operating income for fiscal 2001, or \$3,777.
- ✓ **Starting amount:** Here is the starting financial amount. For Oracle, this is operating income for fiscal 1997, or \$1,299.8.
- ✓ **Number of years:** The sum of the years you're calculating the average return. This is a little tricky. While we're analyzing five years of Oracle's financial history, there are really only four full years of growth: from 1997 to 1998, from 1998 to 1999, from 1999 to 2000 and from 2000 to 2001.

When forecasting a company's future profit, it's often best to use operating income. Operating income strips out one-time charges and gains, which are impossible to forecast.

Following the tremendous downturn in business when many companies suffered in 2008, fundamental analysts began wondering about the value of forecasting based on trend analysis. After all, how can you trust a historical analysis when one bad year can come along and knock the whole model to smithereens?

One way to make sure your fundamental analysis has a long-term time horizon is by using **index-number analysis**. Index-trend analysis is just a way to see how a company's financial results are changing over time. This analysis includes recent drastic ups or downs, but also lets you see the broader, long-term trend.

Moving averages may be applied to annual results or to quarterly results, based on how volatile the company's profits are.

To conduct a moving-average analysis, you first must choose how many years you want to incorporate. A common time period would be three years. You add up the company's results over three-year chunks and then divide by the number of years, or 3. Using this analysis might be a reasonable basis with which to make a forward-looking growth forecast.

Whenever you perform long-term trend analysis, as you've been practicing in this chapter, it's imperative to pull all the data from a company's most current annual or quarterly report. And that's due to a dirty little secret known as restatements. The portion of the 10-K called **Selected Financial Data** is a very useful source of the freshest data, including any restatements.

Officers and directors of a company are permitted to buy and sell their stock, called **legal insider trading**, as long as they follow specific disclosure rules. Looking for trends in the transactions of executives, though, can sometimes tip you off to issues. It's often considered to be a positive sign when a company's top management, including the CEO, is buying shares of the company. Some investors think the ultimate bullish signal is when companies announce they're buying back their own stock. Watching what the insiders are doing can be somewhat telling. There are two main ways to track the insider buying and selling at companies, including from:

- ✓ **Companies' regulatory filings:** Given how sensitive the topic of insider selling is, you can imagine how regulated it is. There is a whole array of filings executives must provide to the Securities and Exchange Commission when buying or selling company stock.

The most common form containing insider-selling activity is Form 4. When an executive buys or sells stock, that activity must be reported on Form 4 within two business days.

✓ **Financial Web sites:** Several financial Web sites spare you the trouble of having to dig up Form 4 filings yourself and compile all insiders' buying and selling in one place. The Nasdaq's Web site provides comprehensive insider-trading data.

Fundamental analysts often use stock screening tools to help them scan through thousands of companies' financial statements, literally, with the push of a few buttons. These screening tools scan through massive databases of fundamental data on stocks to select those that meet characteristics you're looking for.

Why investing in individual companies is risky business

By investing in individual companies, you're exposing yourself to specific risk, or unique business challenges faced by companies. Specific risk is very different than systematic risk, or risk faced by all stocks.

For instance, if there's a credit crisis, as there was in 2008, that's a systematic risk that will (and did) hurt just about every stock. However, if you own a company that makes widgets, and it's found that those widgets cause cancer, that's a specific risk to that one company.

By investing in a broad mutual fund or exchange-traded fund, which owns hundreds of different companies, you can reduce or diversify away your exposure to specific risk. Just because you invest in a company that makes products you understand or even use, doesn't mean you will make money.

One of the top reasons why you want to use fundamental analysis is that investment mistakes are incredibly difficult to recover from. Many times when companies start to stumble, they have a tough time regaining control. When you invest in an individual stock, you're betting that the company's **corporate governance** will be strong enough to kick out the failing management team before things get out of hand. But you also need to have faith the board of directors will bring in a qualified replacement to fix the company.

Table 18-2 Digging Out of a Hole Is Hard to Do

<i>If your loss on a stock is . . .</i>	<i>. . . to break even you need a return of . . .</i>
10%	11.1%
20%	25%
30%	43%
50%	100%
90%	900%

Since large losses can be difficult, if not impossible, to recover from, some fundamental analysts borrow techniques from technical analysis and cut their losses.

*** **IPO :** Companies going public for the first time must provide everyone interested in investing with a regulatory filing called the prospectus. A prospectus is a gigantic file of regulatory disclosures that are kind of like the 10-K, 10-Q and proxy statement all rolled into one.

Bubbles, or periods of time when prices of investments get disconnected from their fundamental value, are a reality in a market economy. When the public is allowed to set the prices on assets in a free-for-all auction, it's inevitable that sometimes prices in the short term are pushed to levels that are difficult to justify with reason.

Sometimes the entire stock market enters a bubble. Sometimes a particular part of the stock market gets bubbly. And sometimes, just a few stocks or types of stocks see their prices shoot up to the stratosphere. Having the self-control to avoid these investments with inflated prices is extremely difficult, since everyone around you who is buying them keeps making money. But fundamental analysis can provide a few things to watch out for as a warning prices might be getting ahead of themselves.

Price-to-earnings ratios getting inflated

When investors start to lose their discipline and begin chasing stocks, you might start to notice P-E ratios are getting inflated. The long-term average for P-Es is generally 15, so when you notice a company's P-E get dramatically higher than that you'll want to take notice. You'll want to analyze a stock's valuation, including its P-E and PEG ratios, to get an understanding of how rich the price is.

If you're interested in trying to figure out when an individual stock's P-E is starting to get lofty, one approach is suggested by BetterInvesting, a large group for investment clubs. BetterInvesting provides electronic software and forms that help you measure how lofty a stock's P-E is relative to earnings forecasts and its historical P-E. A stock is considered to be a "buy" when its P-E falls into the lower one-third of its historical range. Stocks are considered a "sell" when the P-E lands in the upper one-third of the historical range.

Dividend yields sagging

When a stock's dividend yield drops well below the average in its industry, or what's paid by other companies, you might start to wonder whether investors are paying up too much for promises. Similarly, you might be suspicious if one company is the only one in an industry not to pay a dividend.

The more investors pay up for a stock, the more the dividend yield drops, making the dividend yield a decent indicator to pay attention to. You can look up dividend yields paid by other companies to see what the norm is. When a stock's dividend yield gets very high, that may be a signal the company is about to cut the dividend or run into some serious financial difficulties.

Price-to-book ratios skyrocketing

By subtracting the liabilities from the assets, the accountant would come up with the book value of the company. That, the accountant would attest, is the company's value.

Investors, though, approach the valuation question very differently than accountants. Investors might try to figure out how much someone else would be willing to pay for the company. The price at which a company would sell, the investor might say, is how much the company is worth.

If investors and accountants agree on the value of a firm, the stock's price-to-book ratio will be 1. If investors think the company is worth more than what the accountants are saying, the price-to-book will be greater than 1. And if investors think the value of the company is less than what the accountants claim, the price-to-book ratio will be less than 1. When you see a company's price-to-book soar, sometimes it can be a tip-off its stock is in a mini-bubble.

Here's one of the biggest problems with using fundamental analysis to avoid big stock declines: timing. Stocks' valuations can remain inflated for some time and correct with little warning. Consider Google. In 2004, the Internet search company's price-to-book ratio was nearly 20, but the stock still proceeded to nearly quadruple over the next three years. This is another reason why no single fundamental indicator can be completely relied on. And it's another reason why for many investors, stymied by the timing needed to pick stocks, might be best off simply buying and holding a diversified basket of many stocks.

Profitability becomes meaningless

When you start noticing companies that lose money hand-over-fist posting huge stock-price gains, it's time to be on bubble watch. Unless by performing industry and trend analysis, you can be confident the company can generate profits, you should steer clear.

Management teams running companies have a tremendous amount at stake when it comes to the financial results. One disappointing quarter could erode investors' confidence in the company's plan and knock the stock price down. And since executives and members of the board of directors often own big chunks of company stock, they don't want to see the value of their holdings fall. A vast majority of executives' pay is often tied to their company's stock price. If the stock falls, they just took a massive pay cut.

Some of the red flags discussed below aren't illegal. But they all can cause financial results to be manipulated to the point that your fundamental analysis might be compromised.

Swelling accounts receivable

If you start seeing the accounts receivable item on the balance sheet skyrocket to the point where it's outpacing revenue growth, that can be a bad thing. If you see accounts receivable growth outpacing revenue growth, you might wonder if the company is pushing product onto customers to boost revenue. The way a company decides when to book revenue, called *revenue recognition*, may have a profound influence on its results.

Overvalued intangible assets

When intangible asset values are inflated, fundamental analysts might believe a company to be worth more than it is in reality. Many fundamental analysts completely disregard intangible assets when measuring the book value of a company. Since many of these assets probably couldn't be sold if the company were to be liquidated, it's often safe to leave them out of your analysis.

Massive big-bath and “one-time” charges

One commonly used trick by companies is the so-called big-bath restatement. When a company is about to report a poor quarter, it makes it really bad. A company's management writes down the value of assets or pays some expenses ahead of time, which makes the current results look really bad. But by getting all this bad news out, the company sets itself up for the illusion of a better future. These restatements can have a profound effect on inflating a company's future profits. Be especially skeptical of companies, sometimes called **chronic restaters**, which seem to be regularly declaring big one-time charges.

Low “Quality” earnings

Increasing borrowing, or leverage

If the bear market and credit crunch that began in 2007 taught investors anything, it's the danger of borrowing too much. Debt can be a critical portion of a company's total capital structure, since it tends to be cheaper to borrow than to issue stock. But it's a crime for a fundamental analyst not to pay attention to the effect of a company's debt.

The big drawback of fundamental analysis -- Just because a stock might appear to be cheap doesn't mean it will rally anytime soon. And just because a company's historical fundamentals look strong doesn't mean its business can't deteriorate and put the company in jeopardy.

Don't forget, too, that no matter how good you might be performing fundamental analysis, your assumptions might be off, leading to poor investment decisions.

These complications of fundamental analysis are big reasons why some investors consider adding a dose of technical analysis to their technique. Technical analysis, the study of patterns in stock prices, is used by investors who think they can use the opinions of other investors to see something in a stock's future.

Technical analysts are often called chartists because they spend their time poring over stock price charts. These charts show where a stock price has been over time and how many investors have bought or sold the stock.

Studies have shown a stock price's movement in the short term is tied to news events, which are random. Longer-term stock prices respond to a company's earnings and cash flow.

A few ways to potentially boost your fundamental analysis success using techniques from technical analysis include:

✓ **Cutting your losses:** One thing technical analysts are often very good at is cutting their losses. When technical analysts buy a stock, they often have a stock price in mind that they'll sell at if things go south. Knowing how to cut your losses short can be vital when investing in individual companies' stocks, which is a risky endeavor. Some technical analysts suggest investors sell a stock if it falls 10% or more from their purchase price.

✓ **Improving your timing:** Some fundamental analysts like to buy stocks and just hang on. But sometimes stubbornness can be expensive. For instance, you might be sitting on a stock that's not moving, while the rest of the stock market charges ahead. Technical analysis attempts to help you avoid sitting still when there's money to be made in other stocks.

✓ **Helping you to spot manias:** Because technical analysis is so focused on what other investors are doing and what they're paying for a stock, it can help alert a fundamental analyst to manias and bubbles. Knowing when other investors are getting overly enthusiastic about a stock can be a good clue to explain why a valuation might be getting overly lofty.

Watching stock prices can be useful in helping a fundamental analyst form an opinion about the future. Since stock prices tend to foreshadow economic reality three, six or nine months in advance, paying attention to stock price movements may tell fundamental analysts something about what the economy might look like.

Monitoring industry sectors may be especially helpful. If you start noticing shares of companies that make durable goods, or high-ticket items like houses and cars, falling, that may very well be a tip-off that investors expect the economy to slow. That's useful information you might consider when forecasting a company's future earnings growth.

One of the first things most technical analysts plot on a stock chart is the **moving average**. Technical analysts compare a stock's current price to its moving average. If the stock price is greater than the moving average, that's considered to be a bullish signal for the market. If the current stock price is less than the moving average, that's a bearish signal.

If you're going to choose a moving average to pay attention to, you should go with the **200-day**. Technicians get very cautious when a stock price falls below the 200-day moving average, and may wait on the sidelines before buying back in until the stock rises above the 200-day moving average. When a stock falls below the 200-day moving average, that means that every investor who bought the stock within the past year, on average, is losing money. If the stock creeps upward, many of these disappointed investors are eager to dump the stock, making it difficult for the stock to rise.

Most technical analysts also pay close attention, too, to how much **trading volume** is occurring. Trading volume measures how much investors are buying or selling a stock. If buyers and sellers are furiously trading shares back and forth, then trading volume is considered to be high, or active.

When trading volume is active, technical analysts figure they can trust the price movement to a greater degree. For instance, imagine a stock that soars to break into new high ground, but on low trading volume. A technical analyst would be skeptical of the move higher, since a relatively small group of investors powered it. Similarly, if trading volume is heavy, that tells the technical analyst there's a great deal of volume, or conviction, behind the trade.

Table 19-1

Putting Volume and Price Together

<i>If a stock ...</i>	<i>... and trading volume is ...</i>	<i>Technical analysts are ...</i>
Rises	Higher	Bullish
Rises	Lower	Cautiously bullish
Falls	Higher	Bearish
Falls	Lower	Cautiously bearish

Beta, or the beta coefficient, is one of those rare market indicators that both fundamental and technical analysts can agree has value. Beta is a statistical measure of how volatile a stock is relative to the stock market at large.

If an individual stock has a beta of 1, that means it is equally volatile as the general stock market. If beta is less than 1, then the stock tends to swing up and down less than the market. And if a stock's beta is greater than 1, it is less volatile than the market.

There are three things to pay attention to when it comes to short interest:

✓ **Short interest:** A stock's short interest is a measurement of how many shares of a company's stock have been sold short. A company with more shares outstanding, or shares in investors' hands, would naturally have more short interest than a company with fewer shares outstanding.

✓ **Average daily share volume**

✓ **Days to cover:** Days to cover tells you how large a company's short interest really is. Days to cover is calculated by dividing a stock's short interest by its average daily volume. This statistic indicates how many days of typical trading it would take for the number of shares being shorted to trade hands.

The higher a stock's days to cover is, the more heavily shorted it is.

If you're completely confident in your fundamental analysis and know what a company is worth, and believe the stock is undervalued, heavy short interest can actually be a good thing. When stocks are heavily shorted, if the company delivers solid earnings, investors who shorted the stock may scurry to buy back the stock.

A rush by nervous short sellers to buy back a stock they wrongly bet against is called a short squeeze. Short squeezes can cause powerful stock rallies.

Options come in two most basic forms, put options and call options. Put options give investors the right, but not the obligation, to sell a stock at a predetermined price at a set time in the future. Call options, on the other hand, give investors the right, but not the obligation, to buy a stock at a pre-determined price at a set time in the future.

Table 19-2		The Four Basic Options Strategies	
	Calls	Puts	
Buy	A bet the stock price will rise.	A bet the stock price will fall.	
Sell	A bet the stock price will fall.	A bet the stock will rise.	

If you want to get an idea of what investors are expecting from a stock, you'll want to take a look at its **option chain**. An option chain tells you how much investors are paying for both put and call options that expire, or come due, at different times in the future.

Option chains are usually sorted by **strike price**, or the price at which the option kicks in. For instance, imagine you bought a call option for stock ABC at a strike price of \$25 that expires in December. That means you have the right, but not the obligation, to buy the stock at \$25 a share in December.

Fast-forward to November. Imagine the stock is now trading at \$100 a share. Suddenly, having the right to buy a \$100-a-share stock for just \$25 a share is valuable, or *in the money*. However, if instead of trading for \$100 a share, what if the stock is trading for \$2.50? Not many people would want the right to buy a \$2.50 stock for \$25. At that point, your option is considered to be *out of the money*.

If you start noticing the price of call options with strike prices above the current market price going up, that's an indication investors are expecting good things from the stock in the future.

The **put-to-call ratio** gives investors a quick look at how bullish or bearish investors are on a stock's prospects. The ratio is simply the number of puts (which are bearish) divided by the number of calls (which are bullish).

The higher a stock's put-to-call ratio, the more pessimistic investors are about a stock's future.

Warren Buffett, in his 1986 letter to shareholders, put it this way: "We simply attempt to be fearful when others are greedy and to be greedy only when others are fearful." There are many ways to get an idea of when other investors are fearful, which is valuable information for fundamental analysts. One popular indicator of investors' fear is based on options trading. This indicator, called the **Chicago Board of Options Exchange Volatility Index or Vix**, is often looked at as a pretty valuable measure of investors' fear. When the Vix is rising, that means investors are getting increasingly nervous. And when the Vix is falling, that means investors are getting complacent.

Price-to-earnings ratios, or P-Es, and dividend yields are two of the fundamental pieces of data that technical analysts most often will place on a chart.

Momentum investors hope to pile into a stock while it's still soaring, grab a quick gain and get out. One way to apply the concept of momentum to fundamental analysis is by studying earnings acceleration. Here, you're not just looking for companies that are increasing their profitability every quarter or year. You're being even pickier. You want to find companies that are increasing the rate at which earnings are growing.

Fundamental analysts generally use quarterly earnings as their gauge for a company with momentum. Momentum, by its nature, is short-term focused so it makes sense to use short-term data. To perform an earnings-acceleration analysis, you just need to have a company's earnings growth rate for the last few periods. While it's usually done using quarterly results, the analysis can be done using quarters or years.

Your first step is calculating the growth rate between each period. A growth rate is the difference between the most recently reported quarter and the same period in the previous year's quarter. Fundamental analysts often look for quarterly earnings momentum, for instance, when trying to figure out how successful a new product is. New products can be critical to a company's sustained earnings growth. And if something a company introduces is catching on with customers, an earnings-acceleration analysis might show something exciting is going on at the company.

Examples of Fundamental Analysis Unearthing Financial Secrets

Spotting One-Time Charges That Aren't

Spotting outright corporate fraud using just the publicly available financial statements can be very difficult. If a company lies to you and fabricates portions of the financial statements, you are at a huge disadvantage as a fundamental analyst. Fortunately, corporate fraud, while more common than I'd like to see, still remains rare overall.

What's much more common, though, are companies that pad results using perfectly legal tricks you need to watch out for. My top suggestion on detecting when a company is using little tricks to boost earnings is by comparing a company's net income with its free cash flow.

Another thing to be aware of as a fundamental analyst is when companies routinely take so-called **one-time or restructuring charges**. By classifying a charge as one-time or nonrecurring, some analysts might overlook the costs, assuming they are unusual and not indicative of the company's core business. But when you see a company constantly taking one-time charges, be careful. Detecting companies reporting incessant one-time charges can tip you off to an overly aggressive management team.

Spotting Financial Distress a Mile Away

There's a shortcut, though, to finding whether a company is unlikely to make it. It's called the **Altman's Z-score**. The Z-score is a long formula that crunches down many of the things you look for and puts it into a single number.

$$\text{Z-Score} = (0.717 * A) + (0.847 * B) + (3.107 * C) + (0.42 * D) + (0.998 * E)$$

Where:

- A: (Current assets – current liabilities) / total assets
- B: Retained earnings / total assets
- C: Earnings before interest and taxes / total assets
- D: Shareholders' equity / total liabilities
- E: Revenue / total assets

Table 20-1 Where To Find The Numbers You Need For Z-Score

<i>You will find ...</i>	<i>... on the ...</i>
Current assets	Balance sheet
Current liabilities	Balance sheet
Total assets	Balance sheet
Retained earnings	Balance sheet. This is the amount of a company's earnings that it keeps, rather than distributing them to shareholders as <i>dividends</i> .
Earnings before interest and taxes (or EBIT)	Income statement. You'll need to calculate EBIT. Chapter 8 tells you how.
Shareholders' equity	Balance sheet
Revenue	Income statement

Table 20-2

<i>If a company's Z-Score is ...</i>	<i>... Then it's considered ...</i>
Less than 1.2	Highly likely to fail
Between 1.2 and 2.9	In so-so condition
Higher than 2.9	Unlikely to fail

The Z-score is really a quick-and-dirty way to assess a company's health. Don't rely on it solely when making a financial decision, instead, be sure to fully analyze the company's health.

Companies with Potential Environmental Issues

Staying Away from Investment Fads

Even to this day, the absurdity of the dot-com bubble remains one of the best reasons why anyone who buys individual stocks should take the time to understand the fundamentals. More than 117 dot-com companies collapsed between September 1999 and October 2000, according to BCG. Of those, 12 of the failures resulted in bankruptcies, 63 shut down their Web sites completely, and the rest struggled in various forms. But in each case, investors lost nearly all, if not all, their money.

*** Always be suspicious when you see accounts receivable turnover in days jump up like that.

Things to Look at When Analyzing a Company

Measuring How Much of a Company's Earnings Are "Real"

My suggestion on the one form of fundamental analysis you should never skip is the measurement of a company's **quality of earnings**. As soon as you can get your hands on a company's income statement and statement of cash flows, you want to make sure a company's cash from operations is greater than or equal to its net income. When a company is generating cash flow, you have some proof the earnings are real, not just smoke and mirrors allowed by accounting. If you avoid investing in companies with weak cash flow relative to their net income, you may sidestep many bum investments or even outright frauds.

Considering How Much Cash the Company Has

Before you invest a dime in a company, you want to make sure you not only know how much companies have, but also what they owe. You should know:

- ✓ How much cash a company has on the balance sheet.
- ✓ How much the company owes to lenders in the short term and long term.
- ✓ How much cash a company generates.

Paying close attention to these four variables will help you avoid plunking your money down in a company that may not survive.

Making Sure You Don't Overpay

There are countless forces at work to determine a stock's price. Remember, stock prices are set by the constant tug of war between buyers and sellers trading shares back and forth until settling on a price everyone can agree upon. And that's why it's critical for you to not only evaluate how solid a company is, but also how profitable it is and whether it has staying power. It's imperative not to pay too much.

Studies have shown that growth stocks, or shares of companies with the highest valuations measured by price-to-book ratios, are often the biggest disappointments for investors. This means that the more you pay for a stock, the lower your future return is likely to be.

Evaluating the Management Team and Board Members

If you can't trust the management team and board of directors, you shouldn't trust them with your investment. If you don't look at anything else in the proxy statement, always be sure to look for related party transactions between executives or board members and the company. These are side business dealings with the potential to corrupt the ability of executives or board members to represent the interests of investors like you. And even if a CEO is doing an excellent job, be watchful of excessive pay packages.

Examining the Company's Track Record of Paying Dividends

Dividend payments account for a big portion, roughly 4 percent, of the returns generated by stocks over time. Also, steady dividends can make sure you're earning something on your money even if a stock is flat. Dividend payments can also be helpful in helping you decide how much a stock is worth.

Comparing the Company's Promises with What It Delivers

If a company's CEO says a new product is selling like crazy, take the time to look at its revenue growth and also the accounts receivable turnover in days to ensure customers are buying and actually paying for the goods. If a company claims to have posted record profits, it's up to you to not only verify the claim, but also make sure it wasn't the result of accounting puffery.

Always compare the promises made by a CEO in one year's annual report to shareholders with the reality delivered in the following year's financial statements.

Keeping a Close Eye on Industry Changes

The constant danger that a new technology may wipe out a company is one reason why some fundamental analysts stick with easy-to-understand and basic businesses, where consumers keep coming back. Consumer products companies, for instance, don't have to worry that people will stop buying deodorant.

Understanding Saturation: Knowing When a Company Gets Too Big

Eventually, for most companies, the early days of easy growth evaporate as the product and business matures. And when a company expands so much, it becomes more difficult to grow further. Companies often struggle with the transition from a fast-growth company to a slower growth one, and sometimes need to change their entire strategies. Fundamental analysts, too, must change the way they evaluate a company and measure its valuation.

Keep a close eye on a company's *operating profit margin*, or how much of revenue the company keeps in profit after paying direct and indirect costs. When you see the operating profit margin deteriorate, that can be a heads-up that the business' glory days are fading. That doesn't mean you shouldn't invest in a mature business.

Avoiding Blinders: Watching the Competition

When looking to invest in a company, take the time to read statements and documents released by a rival company you might consider to be weaker. Paying attention to statements made by the CEO of a rival company in a letter to shareholders, for instance, might tip you off to industry trends the CEO of the leading company may not have noticed yet.

Things Fundamental Analysis Can't Do

- Ensure You Buy Stocks at the Right Time
 - Guarantee You'll Make Money
 - Save You Time When Picking Stocks
- Protect You from Every Fraud : Fundamental analysts must accept, to a certain degree, the fact they must take financial statements somewhat at their face value. If a company completely fabricates the numbers on the financial statements while the board of directors and auditing firm aren't paying attention, there's only so much a fundamental analyst can do.
- Easily Diversify Your Risk over Many Investments : But generally speaking, if you're going to go to the trouble and expense of digging into the bowels of individual companies, you will likely only be able to keep up with so many stocks. In fact, if you own too many stocks, you might miss some important fundamental details and derail your success.

Being concentrated in a few stocks, though, presents risks, too. A big and unexpected decline in revenue or earnings at one of the companies you're invested in could depth-charge your returns. Worse yet, a massive decline by one of your holdings might make a dent in your portfolio that will be difficult to overcome.

- Predict the Future : Fundamental analysis rarely signals a recovery in stock values or the economy. In fact, fundamentals continue to deteriorate for an average of five months even after the stock market bottoms, according to S&P data.
- Make You the Next Warren Buffett
 - Protect You from Your Own Biases
 - Overcome the Danger of Thinking You're Always Right : If you're going to attempt to pick individual stocks using fundamental analysis, you owe it to yourself to also learn how to track your performance. Every year, you should know how to calculate what your portfolio's return was and how much risk you took on in order to achieve that risk.

How to measure your portfolio's return : Simply subtract your portfolio's value at the end of the year from its value at the start of the year. Divide that difference by your portfolio's value at the beginning of the year and multiply by 100, and voila, that's your percentage gain for the year. Be sure to compare the return of your portfolio to that of the Standard & Poor's 500 or another stock market index to find out if you're beating, or get- ting beaten by, the market.

How to measure your portfolio's risk : To calculate your portfolio's standard deviation, you will first need to tabulate the percentage changes for each period. You can do this analysis based on any period of time. Lastly, you'll need to calculate the standard deviation. Now convert the quarterly standard deviation into an annualized number. You do that by multiplying the period's standard deviation by the square root of the number of periods in a year.

Sizing up your portfolio's risk and return

Just knowing your portfolio's return and risk doesn't tell you much. It's important to compare those data with a benchmark, or a set of investments that you want to size yourself up against. The IFA Risk and Return Calculator (www.ifa.com/portfolios/PortReturnCalc/index.aspx) lets you see the returns and standard deviations of several measures of stocks to see how you're doing. Be careful of drawing too much from just one year. Don't assume that if you had one good year your luck will continue.