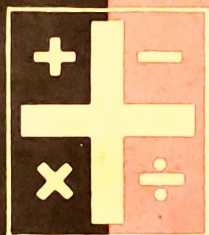


Revised Edition

*How to
Read a*



Financial Report



MERRILL LYNCH, PIERCE, FENNER & SMITH INC

Typical Manufacturing Company, Inc.,
BALANCE SHEET—

ASSETS

Current Assets

Cash	\$ 950,000	
Marketable Securities, at Cost	1,550,000	
(Market Value \$1,570,000)		
Accounts Receivable	\$2,100,000	
Less: Provision for Bad Debts	100,000	2,000,000
Inventories		1,500,000
Total Current Assets		\$6,000,000

Investment in Unconsolidated
Subsidiaries

300,000

Property, Plant, and Equipment

Land	\$ 150,000	
Buildings	3,800,000	
Machinery	950,000	
Office Equipment	100,000	
	<u>\$5,000,000</u>	
Less: Accumulated Depreciation	1,800,000	
Net Property, Plant, and Equipment		3,200,000
Prepayments and Deferred Charges		100,000
Goodwill, Patents, Trademarks		100,000
Total Assets		\$9,700,000

and Consolidated Subsidiaries
DECEMBER 31, 19____

LIABILITIES AND STOCKHOLDERS' EQUITY

Current Liabilities

Accounts Payable	\$1,000,000	
Notes Payable	850,000	
Accrued Expenses Payable	330,000	
Federal Income Tax Payable	320,000	
Total Current Liabilities		\$2,500,000

Long-Term Liabilities

First Mortgage Bonds, 5% Interest, due 1975		2,700,000
Total Liabilities		\$5,200,000

STOCKHOLDERS' EQUITY

Capital Stock:

Preferred Stock, 5% Cumulative, \$100 Par Value Each; Authorized, Issued, and Outstanding 6,000 Shares	\$ 600,000	
Common Stock, \$5 Par Value Each; Authorized, Issued, and Outstanding 300,000 Shares	1,500,000	
Capital Surplus	700,000	
Accumulated Retained Earnings	1,700,000	
Total Stockholders' Equity		4,500,000
Total Liabilities and Stockholders' Equity		\$9,700,000



We believe you will find this booklet helpful, for it explains in clear and simple language how to interpret the facts and figures in a financial report with a view to determining not only the soundness of the company's operation but also the attractiveness of its securities.

This booklet is not intended for accountants and others who already know the fundamentals of bookkeeping. Rather it is designed to be useful to the layman who wants to know more about the companies in which he owns shares or is considering becoming a stockholder.

MERRILL LYNCH, PIERCE, FENNER & SMITH INC

(Abbreviated)

Typical Manufacturing Company,
BALANCE SHEET—

ASSETS

Current Assets

Total Current Assets \$6,000,000

Investment in Unconsolidated Subsidiaries 300,000

Property, Plant, and Equipment

Net Property, Plant, and Equipment 3,200,000

Prepayments and Deferred Charges 100,000

Goodwill, Patents, Trademarks 100,000

Total Assets \$9,700,000



THE BALANCE SHEET

Accountants, like all other professional men, have developed a specialized vocabulary. Sometimes this is helpful and sometimes it is confusing (like their practice of calling the income account "Statement of Profit and Loss" when it is bound to be one or the other). But there are really only a score or so of technical terms that you will have to get straight in your mind. After that is done, the whole foggy business will begin to clear, and you'll be better able to investigate before you invest—and after you invest, too.

On pages 2 and 3, you will find a sample *Balance Sheet*. On pages 4 and 5 is a skeleton balance sheet for the same company. Let's have a look at how it is put together. This particular report is neither the simplest that could be issued nor the most complicated. It is a good sample of the kind of report issued by an up-to-date manufacturing company.

The Balance Sheet represents the financial picture as it stood on one

Balance Sheet)

Inc., and Consolidated Subsidiaries

DECEMBER 31, 19__

LIABILITIES AND STOCKHOLDERS' EQUITY

Current Liabilities

Total Current Liabilities \$2,500,000

Long-Term Liabilities 2,700,000

Total Liabilities \$5,200,000

STOCKHOLDERS' EQUITY

Capital Stock:

Preferred Stock

Common Stock

Capital Surplus

Accumulated Retained Earnings

Total Stockholders' Equity 4,500,000

Total Liabilities and Stockholders' Equity \$9,700,000



particular day, December 31, 19____, as though the wheels of the company were momentarily at a standstill.

This balance sheet is divided into two sides: on the *left* are shown *Assets*; on the *right* are shown *Liabilities* and *Stockholders' Equity*. Both sides are always in balance. In the *Assets* column, you will find listed all the goods and property *owned* as well as claims against others yet to be collected. Under *Liabilities* are listed all the debts due—creditors' claims against the assets. Under *Stockholders' Equity* is the amount of the stockholders' interest in the company—the amount for which the company is accountable to its stockholders.

All of this can be stated another way. Assume that the corporation were to go out of business as of the date of the balance sheet. Assume also (what is probably never so) that the assets when sold bring dollar for dollar the amounts shown in the balance sheet. Then:

Total Assets	\$9,700,000
Amount Required to Pay Liabilities	5,200,000
Amount Remaining for the Stockholders	<u>\$4,500,000</u>

Assets

The first notation on the asset side of the balance sheet is *Current Assets*. In general, current assets include cash and those assets which in the normal course of business will be turned into cash in the reasonably near future, usually within a year from the date of the balance sheet.

Cash is just what you would expect—bills and silver in the till (petty cash fund) and money on deposit in the bank.

Marketable Securities. This asset represents temporary investment of excess or idle cash which is not needed immediately. Such cash is invested in stocks, bonds, and United States Government securities for the purpose of earning dividends and interest. In view of the fact that



the funds so invested may be needed on short notice, it is essential that the securities be readily marketable and be subject to a minimum of price fluctuation. The general practice is to show marketable securities at cost, with a parenthetic note of the market value. For example:

Marketable Securities, at Cost (Market Value \$1,570,000)	\$1,550,000
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The next asset is *Accounts Receivable*. Here we find the amount not yet collected from customers to whom goods were shipped prior to payment. Customers are usually given 30, 60, or 90 days in which to pay. The total amount so due from customers as shown in the balance sheet is \$2,100,000. However, experience shows that some customers fail to pay their bills either because of financial difficulties or by reason of some catastrophic event (such as a tornado, a hurricane, or a flood) befalling their business. Therefore, in order that the asset *Accounts Receivable* be stated at a figure representing the amount that probably will be collected, the total is reduced by a provision for bad debts. The net balance in the amount of \$2,000,000 is thus shown as the asset value for balance sheet purposes. Thus:

Accounts Receivable	\$2,100,000	
Less Provision for Bad Debts	<u>100,000</u>	<u>\$2,000,000</u>

Inventories. The inventory of a manufacturer is composed of three groups: raw materials to be used in the product, partially finished goods in process of manufacture, and finished goods ready for shipment to customers. The generally accepted method of valuation of the inventory is *cost or market, whichever is lower*. This gives a conservative figure. Where this method is used, the value for balance sheet purposes will be cost or perhaps less than cost if, as a result of deterioration, obsolescence, decline in prices, or other factors, less than cost can be realized on the inventory. Cost for purposes of inventory valuation normally includes an allocation of production and other expenses as well as the cost of materials.



To summarize, *Total Current Assets* includes primarily:

Cash
Marketable Securities
Accounts Receivable
Inventories

You will observe that these assets are *working assets* in the sense that they are in a constant cycle of being converted into cash. Inventories when sold become accounts receivable; receivables upon collection become cash; cash is used to pay debts and running expenses. We will discover later on in the book how to make current assets tell a story.

Investment in Unconsolidated Subsidiaries represents the cost to our parent company (Typical Manufacturing Company, Inc.) of the capital stock of another company. It signifies furthermore by the word *subsidiary* that more than 50% of the subsidiary's outstanding capital stock is owned by the parent. When a parent company owns all the stock of another company (or substantially all the stock), then a *Consolidated Balance Sheet* may be issued. This consolidated balance sheet *combines* all assets and liabilities of parent and subsidiary as though they were a single entity. It may not be desirable to consolidate the figures in some cases, such as where the subsidiary is in a foreign country, or is engaged in a business entirely different from that of the parent manufacturing company (such as a bank, a railroad, a coal mine). Then the investment is reported separately as *Investments in Unconsolidated Subsidiaries*, as in the case of Typical Manufacturing.

Fixed Assets

The next item, *Property, Plant, and Equipment*, is sometimes referred to as *Fixed Assets*. It represents those assets not intended for sale which are used over and over again in order to manufacture the product, display it, warehouse it, transport it. Accordingly, this category will include land, buildings, machinery, equipment, furniture, automobiles and trucks. The generally accepted and approved method for valuation is *cost less the depreciation accumulated* to the date of the balance sheet. Depreciation is discussed in the next section.



The figure thus displayed is *not* intended to reflect market value at present or replacement cost in the future. While it is recognized that the cost to replace plant and equipment at some future date may be higher, such factor is too variable to be taken into consideration in the valuation of the asset for balance sheet purposes. The general rule, therefore, is cost less accumulated depreciation based on cost.

Depreciation has been defined for accounting purposes as the decline in useful value of a fixed asset due to wear and tear from use and passage of time or even when not in use by reason of action of the elements. Fixed assets may also suffer a decline in useful value from obsolescence because new inventions and more advanced techniques come to light which make the present equipment out of date.

The cost incurred to acquire the property, plant, and equipment must be spread over its expected useful life, taking into consideration the factors discussed in the preceding paragraph. For example: If an auto-truck costs \$10,000 and is expected to last five years, then, using a "straight-line" method of depreciation, it will decline at the rate of \$2,000 each year. The balance sheet at the end of the *first year* will show:

Auto-Truck (Cost)	\$10,000
Less Accumulated Depreciation	2,000
Net Depreciated Value for Balance Sheet	<u>\$ 8,000</u>

The balance sheet at the end of the *second year* will show:

Auto-Truck (Cost)	\$10,000
Less Accumulated Depreciation	4,000
Net Depreciated Value for Balance Sheet	<u>\$ 6,000</u>

In our sample balance sheet, there is shown a figure for accumulated depreciation. This amount is the total of accumulated depreciation for buildings, machinery, and office furniture. Land is not subject to depreciation, and its cost remains unchanged from year to year.



Net Property, Plant, and Equipment, therefore, is the valuation for balance sheet purposes of the investment in fixed assets. As explained before, it generally consists of the *cost* of the various assets in this classification, *diminished* by the depreciation accumulated to the date of this financial statement. Thus:

Land		\$ 150,000
Buildings	\$3,800,000	
Machinery	950,000	
Office Equipment	100,000	
	<u>\$4,850,000</u>	
Less		
Accumulated		
Depreciation	<u>1,800,000</u>	<u>3,050,000</u>
Net Property, Plant, and Equipment		<u>\$3,200,000</u>

This presentation differs from the way it looks in the sample balance sheet on pages 2 and 3 merely by separating the cost of the *land* from the depreciable assets. The total of \$3,200,000 is the same.

Depletion is a term used primarily by mining and oil companies or any of the so-called extractive industries. Deplete, of course, means exhaust or use up. As the oil or other natural resource is used up, a depletion reserve is set up to compensate for the natural wealth the company no longer owns. This reserve is set up in recognition of the fact that as the company sells its natural product, it must get back not only the cost of extracting it but also the original cost of the natural resource.

Prepayments or *Advance Payments* may arise from a situation such as this: During the year the company paid fire insurance premiums covering a three-year period, or the company leased certain computing machines and by contract paid rental for two years in advance. At the balance sheet date, there exists an unexpended item which will be used up in future years. In our examples, two years' insurance premiums are still unused and one year's rental value of the computing machines is still unused at the end of the first year. If the advance



payments had not been made, the company would have more cash in the bank. Therefore, payments made in advance from which the company has not yet received the benefits but for which it *will* receive benefits in the next accounting years are listed as prepayments among the assets.

Deferred Charges represents a type of asset similar to prepayments. For example, our manufacturer may have spent \$300,000 for introducing a new product to the market, or for moving the plant to a new location, or for research and development. The benefits from this expenditure will be reaped over several years to come. Therefore, management does not think it reasonable to charge off the full expenditure in the year when payment was made. Instead, the cost incurred will be gradually written off over the next several years. This is in accordance with approved accounting principles.

Intangibles may be defined as assets having no physical existence, yet having substantial value to the company. Examples are a franchise granted by the city to a bus company allowing exclusive use of certain routes, and a copyright or a patent granted by law for exclusive publishing or manufacture of a specific article.

Another intangible asset sometimes found in corporate balance sheets is goodwill. Company practices vary considerably in assigning value to this asset. The 1964 annual report of General Motors carries this asset as \$63,442,466 with the following explanation in the footnotes: "Goodwill represents the difference between the purchase price and the value ascribed to net tangible assets of businesses acquired in 1943 and prior years and is not amortized."

Some companies (Federated Department Stores, Reynolds Tobacco, Scott Paper, among others) have reduced the asset value of the intangible assets to a nominal \$1. This indicates that these assets do exist, but the company has adopted a very conservative policy for the carrying value in its balance sheet.

Liabilities

The first item on the liability side of any balance sheet is usually *Current Liabilities*. It generally includes all debts that fall due within



the coming year. It can be said that Current Assets is a companion to Current Liabilities because current assets are the source from which payment of the current debts are made. The relationship between these two classifications is one of the most revealing things to be learned from the balance sheet, and we will go into that quite thoroughly later on.

Accounts Payable represents the amounts that the company owes to its regular business creditors from whom it has bought goods on open account. The company usually has 30, 60, or 90 days in which to pay. Sometimes, as an inducement to pay promptly, the suppliers give a cash discount of, say 2%. Therefore, if an account payable is \$1,000 with terms of "2% in 10 days, net in 30 days," payment of the debt within 10 days earns \$20 (2% of \$1,000), and \$980 will settle the invoice for \$1,000. If the money is owed to a bank or other lender, it appears on the balance sheet under *Notes Payable*, as evidence of the fact that a written promissory note has been given by the borrower.

In an earlier paragraph, accounts payable was defined as the money owed by the company to its regular business creditors. The company also owes, on any given day, salaries and wages to its employees, interest on funds borrowed from banks and from bondholders, fees to attorneys, insurance premiums, pensions, and similar items. To the extent that the amounts accrued are unpaid at the date of the balance sheet, these expenses are grouped as a total under *Accrued Expenses Payable*.

The debt due to the Internal Revenue Service is the same type of liability as any other item under *Accrued Expenses Payable*. However, by reason of the amount and the importance of the tax factor, it is generally stated separately as *Federal Income Tax Payable*.

Total Current Liabilities is the aggregate of the items listed under this classification.

Long-Term Liabilities

In discussing current liabilities, you will recall that we included debts due within approximately one year from the balance sheet date. Here under the heading of *Long-Term Liabilities* are listed debts due after one year from the date of the financial report. In our sample balance



sheet, the only long-term liability is that represented by the 5% First Mortgage Bonds, due 1975. The money was received by the company as a loan from the bondholders, who in turn were given a certificate called a bond as evidence of the loan. The bond is really a formal promissory note issued by the company, which in this case agreed to repay the debt at maturity in 1975 and agreed also to pay interest at the rate of 5% per year. Bond interest is usually payable semi-annually. Furthermore, in addition to the written promise of the company to repay the loan at maturity, the bondholders have an added safeguard indicated by the words *First Mortgage*. This means that if the company is unable to pay off the bonds in cash when and as promised, the bondholders have a claim or lien before other creditors on certain assets which may be sold and the proceeds used to satisfy the debt.

Stockholders' Equity

Stockholders' Equity or *Net Worth*, as was pointed out earlier, is the total equity interest that the stockholders have in this corporation. This is separated for legal and accounting reasons into three categories:

Capital Stock
Capital Surplus
Accumulated Retained Earnings

Capital Stock in the broadest sense represents shares in the proprietary interest in the company. These shares are evidenced by stock certificates issued by the corporation to the shareholders. There may be several different types or classes of shares issued by a corporation, each class having attributes slightly different from those of another class.

Preferred Stock means that these shares have some preference over other shares as regards dividends or in distribution of assets in case of liquidation or both. The specific provisions with respect to any issue of preferred stock can be obtained from the corporation's charter. The fact that in Typical Manufacturing, the preferred stock is designated 5% cumulative, \$100 par value each, means that each share is entitled



to \$5 dividends per year when declared by the Board of Directors *before* any dividends are paid to the common stockholders. The word *cumulative* means that if in any year the dividend is not paid, it accumulates in favor of the preferred shareholders and must be paid to them when available and declared *before* any dividends are distributed on the common stock. Sometimes preferred stockholders do not have a voice in company affairs unless the company fails to pay them dividends at the promised rate.

Common Stock. As was pointed out in the discussion of the preferred stock, owners of the preferred are entitled to a dividend of \$5 per share each year *before* owners of common stock receive anything. But \$5 per share may be all the holders of this preferred stock will receive each year. Common stock, on the other hand, has no such limit on dividends payable each year. Therefore, in prosperous times when company earnings are high, dividends may also be high, with the result that common stock may be an attractive investment.

Capital Surplus is the amount paid in by shareholders over the par or legal value of each share. For example: Say that the common stock has a \$5 par value for each share. Assume that Typical Manufacturing sold 300,000 shares of stock for a total of \$2,200,000. The balance sheet will show the \$2,200,000 under stockholders' equity allocated between capital stock and capital surplus, thus:

Common Stock, \$5 Par Value Each; Authorized, Issued and Outstanding 300,000 Shares	\$1,500,000
Capital Surplus	700,000
Total of Capital Stock (Common) and Capital Surplus	<u>\$2,200,000</u>

Accumulated Retained Earnings or Earned Surplus. Perhaps a good way to explain this item is to say that when a company first starts in business, it has *no* accumulated retained earnings. At the end of its first year, if its profits are \$80,000 and dividends are paid on the preferred stock of \$30,000 but no dividends are declared on the common stock, then the balance sheet will show accumulated retained earn-



ings of \$50,000. Let us go forward to the second year. Assume the profits are now \$140,000 and that dividends paid are \$30,000 on the preferred stock and \$40,000 on the common stock. The accumulated retained earnings will be \$120,000, thus:

Balance at the End of the First Year	\$ 50,000
Net Profit for the Second Year	140,000
Total	<u>\$190,000</u>
Less Dividends Paid:	
On the Preferred Stock	\$30,000
On the Common Stock	<u>40,000</u>
	70,000
Accumulated Retained Earnings (At the End of the Second Year)	<u>\$120,000</u>

Just What Does the Balance Sheet Show?

Before we undertake to analyze the balance sheet figures, a word on just what an investor can expect to learn is in order. A generation or more ago, before present accounting standards and approved accounting principles had gained wide acceptance, considerable imagination went into the preparation of balance sheets. This naturally made the public skeptical of financial reports. Today there is no substantial ground for skepticism. The certified public accountant, the listing requirements of the national stock exchanges, and the regulations of the Securities and Exchange Commission and other governmental regulatory bodies have, for all practical purposes, removed the grounds for doubting the good faith of financial reports.

The investor, however, is still faced with the task of determining the significance of the figures. As we have already seen, a number of items are based to a large degree upon estimates, while others are of necessity somewhat arbitrary.

Independent Audits

The certificate from the accountants which is printed in the report says, first, that the auditing steps taken in the process of verification



of the accounts were in accordance with approved practice, and second, that the financial statements in the report have been prepared in conformity with generally accepted accounting principles.

It is the American Institute of Certified Public Accountants that is responsible for adopting auditing procedures and broad policy concerning acceptable accounting principles.

When the annual report contains financial statements that have the stamp of approval from independent public accountants, you have an assurance that the figures can be relied upon as having been fairly presented.

Footnotes

The annual reports of many companies contain this statement: "The accompanying footnotes are an integral part of the financial statements." The reason is that the financial reports themselves are kept concise and condensed. Therefore, any explanatory matter which cannot readily be abbreviated is set out in greater detail in footnotes.

Most people do not like to read footnotes because they may be complicated and they are almost always printed in small, hard-to-read type. Nevertheless, it is well worth the effort, for a careful reading of the footnotes in conjunction with the statements gives greater meaning to the financial story of the corporation.

Net Working Capital

There is one very important thing that we can find from the balance sheet. That is net working capital, sometimes simply called working capital.

Net Working Capital or *Net Current Assets* is the difference between the total current assets and the total current liabilities. You will recall that current liabilities are the debts due within one year from the date of the balance sheet. The source from which to pay those debts is the current assets. Therefore the working capital or net current assets represents the amount that would be left free and clear if all current debts were paid off. In Typical Manufacturing, the figures are:



WORKING CAPITAL

Current Assets	\$6,000,000
Minus Current Liabilities	<u>2,500,000</u>
Working Capital or Net Current Assets	<u>\$3,500,000</u>

If you consider yourself an investor and not a speculator, you should insist that any industrial company in which you invest have a comfortable amount of working capital. The ability of a company to meet its obligations, expand its volume, and take advantage of opportunities is often determined by its working capital.

Current Ratio

Probably the question in your mind is: "Just what is a comfortable amount of working capital?" Well, there are several methods used by analysts to judge whether a particular company has a sound working capital position. To help you interpret the current position of a company in which you are considering investing, the current ratio is more helpful than the dollar total of working capital. The first rough test for an industrial company is to compare the working capital figure with the total current liabilities. Most analysts say that minimum safety requires that current assets should be at least twice as large as current liabilities. This means that for each \$1 of current liabilities, there should be \$2 in current assets.

The *Current Ratio* is current assets divided by current liabilities. In the Typical Manufacturing balance sheet, the figures are:

CURRENT RATIO

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\$6,000,000}{\$2,500,000} = \frac{2.4}{1} \text{ or } 2.4 \text{ to } 1.$$

Therefore, for each \$1 of current liabilities, there is \$2.40 in current assets to back it up.

There are so many different kinds of companies, however, that this test requires a great deal of modification if it is to be really helpful in analyzing companies in different industries. Generally, companies



that have a small inventory and easily collectible accounts receivable can operate safely with a lower current ratio than those companies having a greater proportion of their current assets in inventory and selling their products on credit.

Quick Assets, Net Quick Assets, Quick Assets Ratio

In addition to net working capital and current ratio, there are other ways of testing the adequacy of the current position. First, what are *Quick Assets*? They are those current assets which are quickly convertible into cash. This leaves out merchandise inventories, because such inventories have yet to be sold. Accordingly, quick assets are current assets minus inventories.

Net Quick Assets are found by taking the quick assets and subtracting the total current liabilities. A well-fixed industrial company should show a reasonable excess of quick assets over current liabilities. Net quick assets provide a rigorous and important test of a company's ability to meet its current obligations.

Quick Assets Ratio is found by dividing the quick assets by the current liabilities.

In the Typical Manufacturing balance sheet, these factors are:

QUICK ASSETS	
Current Assets	\$6,000,000
Minus Inventories	1,500,000
Quick Assets	<u>\$4,500,000</u>
NET QUICK ASSETS	
Quick Assets	\$4,500,000
Minus Current Liabilities	2,500,000
Net Quick Assets	<u>\$2,000,000</u>
QUICK ASSETS RATIO	
Quick Assets	\$4,500,000
Current Liabilities	\$2,500,000
	$\frac{4.5}{2.5} = 1.8$ or 1.8 to 1

Thus, for each \$1 of current liabilities, there is \$1.80 in quick assets available.

Inventory Turnover

How big an inventory should a company have? That depends on a combination of many factors. An inventory is large or small depending upon the type of business and the time of the year. An automobile



dealer, for example, with a large stock of autos at the *height* of the season is in a strong inventory position; yet that same inventory at the *end* of the season is a weakness in his financial condition.

There are dangers in a large inventory position. In the first place, a sharp drop in price may cause serious losses. And second, it may indicate that the company has accumulated a big supply of unsalable goods.

How can we measure adequacy and balance of inventory? One way is to compare it with sales for the year to arrive at *Inventory Turnover*. Typical Manufacturing's sales for the year are \$6,500,000, and the inventory at the balance sheet date is \$1,500,000. Thus the turnover is $4\frac{1}{3}$ times, meaning that the goods are bought and sold out more than four times per year on the average. (Strict accounting requires computation of *Inventory Turnover* by comparing annual *Cost of Goods Sold* with *Average Inventory*. Such information is not readily available in the published statements; hence an approved substitute is *Sales Related to Inventory*.)

Inventory as a Percentage of Current Assets. Another comparison may be made between inventory and total current assets. In Typical Manufacturing the inventory of \$1,500,000 represents 25% of the total current assets, which amount to \$6,000,000. But there is considerable variation between different types of companies, and thus the relationship is significant only when such comparison is made among companies in a similar industry.

Net Book Value of Securities — Net Asset Value of Securities

There is another very important thing that can be learned from the balance sheet, and that is the *Net Book Value* (the value at which something is carried on the books of the company) or *Net Asset Value* of the company's securities. We can calculate these values for each of the three types of securities that our company has outstanding by a bit of simple arithmetic.

Net Book Value or Net Asset Value Per Bond. For a \$1,000 bond, or for a share of preferred stock, or for a share of common stock, this value represents the amount of corporate assets backing or protecting these securities. In order to state the resulting figure conservatively, the intangible assets are subtracted as though they have no value upon liquidation. Then the current liabilities of \$2,500,000 are considered to have been paid off. This leaves \$7,100,000 in assets available to



pay off the bondholders. For Typical Manufacturing, we find there is \$2,629 in net book value or net asset value protecting each \$1,000 bond, calculated as follows:

NET BOOK VALUE PER BOND OR NET ASSET VALUE PER BOND	
Total Assets	\$9,700,000
Less Intangibles	<u>100,000</u>
Total Tangible Assets	\$9,600,000
Deduct Current Liabilities	<u>2,500,000</u>
Net Tangible Assets Available to Meet Bondholders' Claims	<u>\$7,100,000</u>

Divide this figure by 2,700, representing the number of \$1,000 bonds outstanding:

$$\frac{\$7,100,000}{2,700} = \$2,629 \text{ Net Book Value or Net Asset Value per } \$1,000 \text{ bond}$$

Net Book Value or Net Asset Value Per Share of Preferred Stock. To calculate the net book value or net asset value of a share of preferred stock, we determine first the total assets, conservatively stated at \$9,600,000 (after eliminating \$100,000 of intangible assets). Then the current liabilities of \$2,500,000 and the long-term liabilities are considered to have been paid off. This leaves \$4,400,000 of resulting assets protecting the preferred stock outstanding. Accordingly, \$733 is the net book value or net asset value backing each share of preferred stock, calculated in this way:

NET BOOK VALUE OR NET ASSET VALUE PER SHARE OF PREFERRED STOCK	
Total Assets	\$9,700,000
Less Intangibles	<u>100,000</u>
Total Tangible Assets	\$9,600,000
Deduct: Current Liabilities	<u>\$2,500,000</u>
Long-term Liabilities	<u>2,700,000</u>
Net Assets Backing the Preferred Stock	<u>\$4,400,000</u>

$$\frac{\$4,400,000}{6,000} = \$733 \text{ Net Book Value or Net Asset Value per Share of Preferred Stock}$$

Shares of Preferred Stock Outstanding



Net Book Value or Net Asset Value Per Share of Common. The net book value or net asset value per share of common stock can be looked upon as meaning the amount of money each share would receive if the company were liquidated, based on balance-sheet values. Of course, the preferential liquidation rights of bondholders and preferred stockholders would first have to be satisfied. The answer, \$12.67 net book value per share of common stock, is arrived at as follows:

NET BOOK VALUE OR NET ASSET VALUE PER SHARE OF COMMON STOCK	
Total Assets	\$9,700,000
Less Intangibles	<u>100,000</u>
Total Tangible Assets	\$9,600,000
Deduct: Current Liabilities	<u>\$2,500,000</u>
Long-term Liabilities	<u>2,700,000</u>
Preferred stock	<u>600,000</u>
Net Assets Available for the Common Stock	<u>\$3,800,000</u>

$$\frac{\$3,800,000}{300,000} = \$12.67 \text{ Net Book Value or Net Asset Value per Share of Common Stock}$$

Shares of Common Stock Outstanding

An alternative method of arriving at the common stockholders' equity—conservatively stated at \$3,800,000—is:

Common Stock	\$1,500,000
Capital Surplus	700,000
Accumulated Retained Earnings	<u>1,700,000</u>
	3,900,000
Subtract Intangible Assets	<u>100,000</u>
Total—Common Stockholders' Equity	<u>\$3,800,000</u>

$$\frac{\$3,800,000}{300,000} = \$12.67 \text{ Net Book Value or Net Asset Value Per Share of Common Stock}$$



While this is an interesting figure, it is not as significant as the coverage on the senior securities (bonds and preferred stock). In case of liquidation, the assets disposed of at a forced sale do not bring nearly the values as carried in the books. Nevertheless, the net book value does give us a basis of comparison with other companies. Furthermore, comparisons of net book values over a period of years shows us whether the company is growing or losing ground. Earnings available for common stock are of far greater importance, as we will see shortly.

Do not be misled by book value figures, particularly of common stocks. Profitable companies often show a very low net book value and very substantial earnings. Railroads, on the other hand, may show a high book value for their common stock but have such low or irregular earnings that the market price of the stock is much less than its apparent book value. Insurance companies, banks, and investment companies are exceptions to what we have said about net book value of common stock. Since their assets are largely liquid (cash, accounts receivable, and marketable securities), the book value of their common stock is sometimes a fair indication of its market value.

Proportion of Bonds, Preferred, and Common Stock

Capitalization Ratios. Before investing, you will want to know the proportion of each kind of security issued by the company you are considering. These proportions are sometimes referred to as Capitalization Ratios. A high proportion of bonds sometimes reduces the attractiveness of both the preferred and common stock, while too large an amount of preferred can detract from the value of the common. The principal reason is that bond interest must be paid before preferred stock dividends, and preferred stock dividends before common stock dividends.

The Bond Ratio is found by dividing the face value of the bonds, \$2,700,000 for Typical Manufacturing, by the total value of the bonds, preferred stock, common stock, capital surplus, and accumulated retained earnings, amounting to \$7,200,000. This shows that bonds amount to $37\frac{1}{2}\%$ of the total capitalization. *Capitalization*



means the face value of bonds and par value of stocks (both preferred and common) that a company has outstanding. But we must include also the amount of capital surplus and the accumulated retained earnings which have been plowed back into the corporation. The capitalization of Typical Manufacturing therefore consists of:

CAPITALIZATION	
Bonds	\$2,700,000
Preferred Stock	600,000
Common Stock	1,500,000
and	
Capital Surplus	700,000
Accumulated Retained Earnings	1,700,000
Total Capitalization	<u>\$7,200,000</u>

The Preferred Stock Ratio is found in the same way: Divide the preferred stock of \$600,000 by the entire capitalization of \$7,200,000. The result is $8\frac{1}{3}\%$.

Naturally, the *Common Stock Ratio* will be the difference between 100% and the total of the bond and preferred stock ratios— $54\frac{1}{6}\%$ in our example. The same result is reached by combining the common stock, capital surplus, and accumulated earnings and dividing by the total capitalization. Both capital surplus and accumulated earnings represent additional backing for the common stock. The capital surplus usually indicates the amount paid by stockholders in excess of the par value of the common stock; the accumulated retained earnings are undistributed profits plowed back to help the corporate growth. For Typical Manufacturing we add to the common stock of \$1,500,000 the capital surplus of \$700,000 and the accumulated retained earnings of \$1,700,000 for a total of \$3,900,000. This figure divided by \$7,200,000 total capitalization gives $54\frac{1}{6}\%$ as the common stock ratio.

To summarize, the proportion of bonds, preferred, and common stock for Typical Manufacturing is:



CAPITALIZATION RATIOS

	Amount	Ratio
Bonds	\$2,700,000	37½ %
Preferred Stock	600,000	8⅓ %
Common Stock (Including capital surplus and retained earnings)	3,900,000	54⅙ %
Total	<u>\$7,200,000</u>	<u>100 %</u>

Generally speaking, it is considered desirable for an industrial company to have no more than a 25% bond ratio, and for the common stock ratio to be at least as much as the total of the bond and preferred stock ratios. If these proportions are not maintained, a company may find it difficult to raise new capital. Banks are reluctant to lend money to companies with relatively large debts, and investors are reluctant to buy their common stock because of all the bond interest or preferred dividends that must be paid before the common stockholder receives any return.

Railroads and public utility companies are exceptions to most of the rules of thumb that we use in discussing Typical Manufacturing Company. Their situation is different because of the tremendous amounts of money they have invested in their fixed assets, their small inventories, and the ease with which they can collect their receivables. Senior securities of railroads and utility companies frequently amount to more than half of their capitalization.

Leverage

A stock is said to have high leverage if the company that issued it has a large proportion of bonds and preferred stock outstanding in relation to the amount of common stock. Speculators are often interested in companies that have a high proportion of debt or preferred stock because of the *Leverage Factor*. A simple illustration will show why. Let us take, for example, a company with \$10,000,000 of 4% bonds outstanding. If the company is earning \$440,000 before bond interest, there will be only \$40,000 left for the common stock after payment of \$400,000 bond interest (\$10,000,000 at 4% equals \$400,000). However, an increase of only 10% in earnings (to \$484,000) will



leave \$84,000 for common stock dividends, or an increase of more than 100%. If there is only a small common stock issue, the increase in earnings per share will appear very impressive.

You have probably realized that a decline of 10% in earnings would not only wipe out everything available for the common stock, but result in the company's being unable to cover its full interest on its bonds without dipping into accumulated earnings. This is the great danger of so-called high-leverage stocks and also illustrates the fundamental weakness of companies that have a disproportionate amount of debt or preferred stock. Investors will do well to steer clear of them. Speculators, however, will continue to be fascinated by the market opportunities they offer.

THE INCOME STATEMENT

Some companies refer to this statement as *The Earnings Report* or *The Statement of Profit and Loss*. We have called it *Income Statement*. It appears on page 35 of this book.

While the balance sheet shows the fundamental soundness of a company by reflecting its financial position at a given date, the *Income Statement* may be of greater interest to investors because it shows the record of its operating activities for the whole year. It serves as a valuable guide in anticipating how the company may do in the future.

The income statement matches the amounts received from selling the goods and other items of income on the one hand against all the costs and outlays incurred in order to operate the company on the other hand. The result is a *Net Profit* for the year or a *Net Loss* for the year. For example:

Sales for the Year and Other Income	\$6,610,000
Costs Incurred	<u>6,255,000</u>
Net Profit	<u>\$ 355,000</u>

The costs incurred usually consist of cost of the goods sold; overhead expenses such as wages and salaries, rent, supplies, depreciation; interest on money borrowed; and taxes.



The most important source of revenue always makes up the first item on the income statement. In Typical Manufacturing, it is *Net Sales*. If it were a railroad or a utility instead of a manufacturer, this item would be called *Operating Revenues*. In any case, it represents the primary source of money received by the company from its customers for goods sold or services rendered. Net sales is the amount received after taking into consideration returned goods and allowances for reduction of prices.

A secondary source of revenue referred to as Other Income or Miscellaneous Income comes from dividends and interest received by the company from its investments in stocks and bonds, which are carried as assets in the balance sheet.

Cost of Sales and Operating Expenses

In a manufacturing establishment, *Cost of Sales* represents all the costs incurred in the factory (including depreciation, which we have stated separately for Typical Manufacturing) in order to convert raw materials into finished product. These costs include raw materials, direct labor, and such factory overhead items as supervision, rent, electricity, supplies, maintenance, and repairs.

Depreciation is the decline in useful value of an asset due to wear and tear. Each year's decline in value of a machine used in the manufacturing process is a cost or a loss to be borne as an expense chargeable against the production as an additional outlay.

Selling and Administrative Expenses

These expenses are generally grouped separately from Cost of Sales so that the reader of an income statement may see the extent of selling costs and administrative costs. Salesmen's salaries and commissions, advertising and promotion, travel, and entertainment are usually the significant items of *Selling Expenses*. Executives' salaries, office payroll, office expenses, and the like are the usual items included as *Administrative Expenses*.

Interest Expense

The interest paid to bondholders for the use of their money is sometimes referred to as a Fixed Charge for the reason that the interest must be paid year after year whether the company is making money or



losing money. Interest differs from dividends on stocks, which are payable only if the board of directors at a meeting declares the dividends to be paid.

Interest paid is another cost of doing business and is deductible from earnings in order to arrive at a base for the payment of income taxes. Typical Manufacturing's First Mortgage Bonds, carried on the balance sheet as a long-term liability, bear 5% interest on \$2,700,000. Thus the interest expenses in the income statement is equal to \$135,000 per year.

Federal Income Tax

Assume tax rates of 22% on the first \$25,000 of income and 48% on the income in excess of \$25,000. Typical Manufacturing's income before taxes is \$675,000; the tax comes to \$320,000 (rounded off). Therefore, the after-tax net income is \$355,000.

Net Income

After we have taken into consideration all income (*plus* factors) and deducted all costs and expenses (*minus* factors), we arrive at Net Income for the year. In condensed fashion, the income statement looks like this:

CONDENSED INCOME STATEMENT			
Plus Factors			
Net Sales	\$6,500,000		
Other Income	110,000		
Total			\$6,610,000
Minus Factors			
Cost of Sales and			
Operating Expenses	\$5,800,000		
Interest on Bonds	135,000		
Provision for			
Federal Income Tax	320,000	6,255,000	
Net Income			<u>\$ 355,000</u>

Net Income is the amount available to pay dividends on the preferred and common stock and to use in the business. To the extent that dividends declared by the board of directors are less than the net income, the excess is plowed back into the corporation and is reflected



in the accumulated retained earnings. From the balance sheet, we have learned a good deal about the company's stability and soundness of structure; from net profit from operations, we judge whether the company is earning money on its investment.

The figure given for a single year is not nearly the whole story, however. The historical record for a series of years is more important than the figure for any single year. This is just as true of net income as any other item.

Even though a company shows no profit in a particular year or winds up with a loss for the year, the board of directors may deem it prudent to continue to pay a dividend to the stockholders. Such distribution comes from the accumulation of earnings of former years.

Analyzing the Income Statement

The income statement, like the balance sheet, will tell us a lot more if we make a few detailed comparisons. The size of the totals on an income statement doesn't mean much by itself. A company can have hundreds of millions of dollars in net sales and be a very bad investment. On the other hand, even a very modest profit may make a security attractive if there is only a small number of shares outstanding.

Before you select a company for investment, you will want to know something of its *Operating Margin of Profit* and how this figure has changed over the years. Typical Manufacturing had sales for the year of \$6,500,000 and showed \$700,000 as the operating profit. Therefore,

OPERATING MARGIN OF PROFIT RATIO

$$\frac{\text{Operating Profit}}{\text{Sales}} = \frac{\$ 700,000}{\$6,500,000} = 10.8\%$$

meaning that for each dollar of sales there remained 10.8¢ as a gross profit from operations. By itself this figure is interesting, but it can be more meaningful and more significant in two ways.

In the first place, we can compare it with the margin of profit in previous years. Changes in profit margin can reflect changes in efficiency as well as changes in products manufactured or in types of customer served. Second, we can also compare our company with other com-



panies that do a similar type of business. If the margin of profit of our company is very low in comparison with other companies in the same field, it is an unhealthy sign. Naturally, if it is high, there are grounds for optimism.

Analysts also frequently use *Operating Cost Ratio* for the same purpose. The operating ratio is the complement of the margin of profit. The margin of profit in Typical Manufacturing is 10.8%. The operating cost ratio is 89.2%. You can find the operating cost ratio either by subtracting the operating margin of profit ratio from 100 or dividing the total of operating costs of \$5,800,000 by net sales, amounting to \$6,500,000.

The two ratios may be summarized as follows:

OPERATING RATIOS

	Amount	Ratio
Net Sales	\$6,500,000	100%
Operating Costs	5,800,000	89.2%
Operating Profit	\$ 700,000	10.8%

Net Profit Ratio is still another guide to indicate how satisfactory the year's activities have been. In Typical Manufacturing, the net profit was \$355,000. The net sales for the year amounted to \$6,500,000. Therefore, Typical Manufacturing's profit was \$355,000 on \$6,500,000 of sales or

NET PROFIT RATIO

$$\frac{\text{Net Profit}}{\text{Sales}} = \frac{\$ 355,000}{\$6,500,000} = 5.5\%$$

This means that for every \$1 of goods sold, 5½¢ in profit ultimately went to the company. By comparing the net profit ratio from year to year for the same company and with other companies in the same industry, we can best judge profit progress. For example:

The American Iron and Steel Institute and United States Steel Corporation give the following figures of *Profits Per Dollar of Sales* (that is, net profit ratio):



Year	Steel Industry Percentage	U.S. Steel Percentage
1961	5.2	5.7
1962	4.1	4.7
1963	5.4	5.6
1964	6.1	5.7
1965	6.0	6.2
1966	5.9	5.6

By way of comparison, American Telephone & Telegraph Company figures of net earnings as a percentage of revenues are:

Year	Percentage
1961	15.3
1962	15.5
1963	15.5
1964	16.1
1965	16.2
1966	16.3

The margin of profit ratio, the operating cost ratio, and the net profit ratio, like all those we examined in connection with the balance sheet, give us general information about the company and help us judge its prospects for the future. All these comparisons have significance for the long term, since they tell us about the fundamental economic condition of the company. But there remains one question: Are the securities good investments for you now?

Investors are interested in varying degrees in (1) capital gains, (2) safety of principal, and (3) regularity of income.

Capital gains may be *short-term* where the sales take place within six months of the purchase; *long-term* gains result where the sales take place more than six months from date of purchase.

Some investors are concerned with the rate of return on their investments. But the rate of return will be affected by the importance placed on safety. High income implies risk; safety must be bought by accepting a lower return.

The safety of any security is determined primarily by the earnings of the company that are available to pay interest or dividends on the particular issue. But again aggregate dollar figures are merely the first step. What we want to know is the relationship between the total money earned and the availability of the earnings for each of the securities issued by the company.



Interest Coverage

The bonds of Typical Manufacturing represent a very substantial debt, but they are due many years hence. The yearly interest, however, is a fixed charge, and one of the first things we would like to know is how readily the company can pay the interest. More specifically, we would like to know whether the borrowed funds have been put to good use so that the earnings are ample and therefore available to meet the interest cost.

The available income representing the source for payment of the bond interest is \$810,000 (total income before interest on bonds and provision for income tax). The annual bond interest amounts to \$135,000. Therefore:

TIMES FIXED CHARGES EARNED	
$\frac{\text{Total Income}}{\text{Interest on Bonds}}$	$\frac{\$810,000}{\$135,000} = 6$

meaning the annual interest expense is covered six times.

Before an industrial bond can be considered a safe investment, most analysts say that the company should earn its bond interest requirement three to four times over. By these standards, Typical Manufacturing has a fair margin of safety.

Preferred Dividend Coverage

To calculate the *Preferred Dividend Coverage* (the number of times preferred dividends were earned), we must use net income as our base, since federal income taxes and all interest charges must be paid before anything is available for stockholders. Since we have 6,000 shares of \$100 par value of preferred stock that pays a dividend of 5%, the total dividend requirement for the preferred stock is \$30,000. Dividing the net income of \$355,000 by this figure, we arrive at approximately 11.8, which means that the dividend requirement of the preferred stock has been earned more than eleven times over, a very safe ratio.



Earnings Per Common Share

The buyer of common stocks is often more concerned with the earnings per share of his stock than he is with the dividend. It is usually earnings per share or, rather, prospective earnings per share, that influence stock market prices. Our income statement does not show the earnings available for the common stock, so we must calculate it ourselves as follows:

EARNINGS PER SHARE OF COMMON

Net Income for the Year	\$355,000
Less Dividend Requirements on Preferred Stock	30,000
Earnings Available for the Common Stock	<u>\$325,000</u>
Number of Shares of Common Outstanding	<u>300,000</u>
Earnings Available \$325,000 Number of Shares 300,000	$= \$1.08\frac{1}{3}$
Earnings Per Share of Common	

If you look back to the accumulated retained earnings statement, you will observe that the dividends on the common stock declared and paid this year amounted to \$120,000. Based on 300,000 shares of common stock outstanding, this means that the dividend rate was 40¢ per share. The amount of earnings plowed back—that is, not distributed—is:

Earnings Available for Common Stock	\$325,000
Dividends Paid Out on Common	<u>120,000</u>
Current Year's Undistributed Earnings Allowed to Accumulate in the Corporation	<u>\$205,000</u>

All these ratios have been calculated for a single year. It cannot be emphasized too strongly, however, that the record over the years is more important to the investor than the report of any single year. By all the tests we have employed, the bonds, the preferred and the common stock of Typical Manufacturing appear to be very sound securities. Deciding whether or not they are good investments requires an analysis of additional factors.



Price-Earnings Ratio

Both the price and the return on common stock vary with a multitude of factors. One such factor is the relationship that exists between the earnings per share and the market price. It is called the price-earnings ratio, and this is how it is calculated: If a stock is selling at 25 and earning \$2 per share, its price-earnings ratio is $12\frac{1}{2}$ to 1, usually shortened to $12\frac{1}{2}$, and the stock is said to be selling at $12\frac{1}{2}$ times earnings. If the stock should rise to 40, the price-earnings ratio would be 20.

In Typical Manufacturing, the earnings per share were calculated at $\$1.08\frac{1}{3}$. If the stock were selling at $16\frac{1}{4}$, the price-earnings ratio would be about 15. This is the basic figure that you should use in viewing the record of this stock over a period of years and in comparing the common stock of this company with other similar stocks.

PRICE-EARNINGS RATIO

$$\frac{\text{Market Price}}{\text{Earnings Per Share}} = \frac{16\frac{1}{4}}{\$1.08\frac{1}{3}} = 15$$

This means that Typical Manufacturing's common stock is selling at approximately 15 times earnings.

Cash Flow

You will observe from the net profit shown on the income statement that Typical Manufacturing was \$355,000 better off by reason of the year's operating results. One of the elements of cost that was taken into consideration was *depreciation* in the amount of \$900,000. Now, this amount does *not* represent an actual outlay of cash; it represents rather the annual write-off of an investment in fixed assets, showing the decline in value due to use during the year. Therefore, we can regard the current year as having generated \$1,255,000 in cash, thus:

Net Profit for the Year	\$355,000
Restore Depreciation Write-off, Which is Not an Outlay of Funds	<u>900,000</u>
Profit for the Year on this Basis—Cash Flow	<u>\$1,255,000</u>



Cash Flow Per Share Common. We can go one step further and determine how much the cash flow amounted to per share of common stock. First, let us make provision for payment of the dividend on the preferred stock in the amount of \$30,000 (\$5 per share on 6,000 shares). That leaves \$1,225,000 (\$1,255,000 less \$30,000 preferred dividend). When this figure is divided by 300,000 shares of common stock outstanding, we get \$4.08 as the cash flow for the year applicable to each share of common.

Source of Funds and Their Application. A more significant presentation of cash flow for a corporation should show how the funds were used during the year. For example:

Source of Funds	
Net Profit for the Year	\$355,000
Add Back Depreciation	900,000
Total Source of Funds	<u>\$1,255,000</u>
Application as follows:	
To purchase new plant equipment	\$675,000
To redeem long-term debt	150,000
To pay dividends	<u>\$150,000</u>
	975,000
Balance remaining added to working capital	<u>\$ 280,000</u>

Selecting common stocks for investment requires careful study of factors other than those we can learn from financial statements. The economics of the country and the particular industry must be considered. The management of the company must be studied and its plans for the future assessed. Information about these other things is not in the financial report. These other facts must be gleaned from the press or the financial services or supplied by some research organization. The Research Division of Merrill Lynch, Pierce, Fenner & Smith stands ready to help you get the available facts you need to be an intelligent investor.

MERRILL LYNCH, PIERCE, FENNER & SMITH INC

Typical Manufacturing Company, Inc., and Consolidated Subsidiaries

INCOME STATEMENT—YEAR 19____

Net Sales		\$6,500,000
Cost of Sales and Operating Expenses		
Cost of Goods Sold	\$4,400,000	
Depreciation	900,000	
Selling and Administrative Expenses	500,000	5,800,000
Operating Profit		<u>\$ 700,000</u>
Other Income		
Dividends and Interest		110,000
Total Income		<u>\$ 810,000</u>
Less: Interest on Bonds		135,000
Profit before Provision for Federal Income Tax		<u>\$ 675,000</u>
Provision for Federal Income Tax		320,000
Net Profit for the Year		<u><u>\$ 355,000</u></u>

ACCUMULATED RETAINED EARNINGS STATEMENT (EARNED SURPLUS)—YEAR 19____

Balance January 1, 1965		\$1,495,000
Add: Net Profit for the Year		355,000
Total		<u>\$1,850,000</u>
Less: Dividends Paid		
On Preferred Stock	\$ 30,000	
On Common Stock	120,000	150,000
Balance December 31, 1965		<u><u>\$1,700,000</u></u>