SECURITY ANALYSIS

The dilemma for the portfolio manager and the investor is whether to follow the implication of the empirical evidence and the theory of market efficiency or to ignore it. Should one accept a passive investment strategy of an index fund or will the effort and expense of active management provide a superior portfolio? You saw in our discussion of market efficiency that finding undervalued securities is hardly easy. At the same time, there are enough doubts about the accuracy of the efficient market hypothesis that the search for such securities should not be dismissed out of hand. Moreover, it is the continuing search for mispriced securities that maintains a nearly efficient market. Even infrequent discoveries of minor mispricing justify the salary of a stock market analyst.

The area of security analysis can be divided into fundamental analysis and technical analysis. **Fundamental analysis** refers to the search for information concerning the current and prospective profitability of a company in order to discover its fair market value. **Technical analysis** embraces the use of information contained in stock market data to identify trends that will uncover trading opportunities. Empirical evidence suggests that neither of these approaches, especially the latter, is fruitful on the whole, but both are widely practised and must be understood.

Fundamental analysis has various aspects to it, including an economic analysis of how the firm will react to potential future conditions that will affect earnings; alternatively, the analyst can examine the recent financial results of the firm in the hope of finding unrecognized value. In this chapter, we see how valuation based on cash flow can be estimated from earnings; earnings themselves are predicted by examining economic

conditions. In the following two chapters, we examine financial statement analysis and technical analysis.

We start with a discussion of alternative measures of the value of a company. From there, we review *dividend discount models*, from the simple growth model to compound variants; this leads to an examination of how earnings and dividend payouts are related to growth. Next, we turn to price-earnings (or P/E) ratios, which are employed widely by analysts but must be used carefully. We explain how P/E ratios are indicative of growth potential for the firm, and thus of dividends. At this point, we discuss two alternative strategies, growth investing and value investing. Finally, we examine the broader issue of how economic conditions affect the prospects of the firm. First, we analyze the effect of inflation, and then we identify key macroeconomic variables and discuss business cycles; from there we consider industry analysis and the sensitivity of the firm to the general environment.

14.1 THE BALANCE SHEET APPROACH TO VALUATION

Underlying all valuation approaches there must be an appeal to the fundamental accounting relationship between total assets and liabilities. The elementary result is known as **book value**, which determines the equity and other liability claims against the assets of the firm. Table 14.1 gives the balance sheet totals for Brascan to illustrate how to calculate the book value per share. On December 31, 2000 the share value calculated by dividing the total equity by the number of shares outstanding is $24.11 ($4,082 million divided by 169.3 million shares). On the same date, Brascan's shares traded for $22 on the TSE. Does this mean that the two values can be expected to be relatively equal?

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The book value is established by applying a set of arbitrary accounting rules to spread the acquisition cost of assets over a specified number of years, whereas the market price of a stock takes account of the firm's value as a going concern. In other words, the market price reflects the present value of its expected future cash flows. It would be unusual if the market price of Intel stock were exactly equal to its book value.

Can book value represent a "floor" for the stock's price below which the market price can never fall? Apparently not, from the Brascan example, although it is common for conglomerates like Brascan to sell at a discount to the value of their aggregate components. Usually, however, the market value is considerably higher than book value. For instance, at the end of 2000, Nortel's book value (U.S. dollars) was $9.37 per share ($29,109/3,108), while its share price on the NYSE was about $32.50 (down from $80 four months earlier).

A better measure of a floor for the stock price is the **liquidation value** per share of the firm. This represents the amount of money that could be realized by breaking up the firm, selling its assets, repaying its debt, and distributing the remainder to the shareholders. The reasoning behind this concept is that if the market price of equity drops below the liquidation value of the firm, the firm becomes attractive as a takeover target. A corporate raider would find it profitable to buy enough shares to gain control and then actually to liquidate, because the liquidation value exceeds the value of the business as a going concern.

Another balance sheet concept that is of interest in valuing a firm is the **replacement cost** of its assets less its liabilities. Some analysts believe the market value of the firm cannot remain for