1. Introduction

It has been said that corporate financial statements serve a variety of purposes. This paper, however, is concerned with only one of them, providing information that is useful to investors for deciding whether to buy, sell or hold the common shares of a corporation.

We, therefore, are concerned with two questions. One is what do investors want to know for the purpose of making such investment decisions? The other question is how useful are the alternative bases of income determination and asset valuation that are or may be used in financial statement preparation for obtaining the desired information. More precisely, we will compare the usefulness of net present value, historical cost, replacement cost, and general price level adjusted cost as bases for income determination and asset valuation in providing information for investment decisions.

2. Valuation of an investor's share

In finance we represent an investor as maximizing the utility of his wealth one period hence. This depends on his personality and on the mean, variance and perhaps other parameters of his wealth one period hence. The variation in an investor’s utility with his investment in a share depends on the risk return attributes of the share. Nonetheless for our purposes we may look on the investor as being concerned only with the price and value of the share. The price he knows and the value is the expected value of the dividend for the coming period plus the price at the end of the period discounted at a rate appropriate to the risk of the sum. Visualizing the repetition of this valuation process one period hence, it can be seen that the value of a share is the expected values of the future stream of dividends discounted at a rate appropriate to their risk, or:
\[ V = \sum_{t=1}^{\infty} \frac{D_t}{(1 + k)^t} \]

where \( D_t \) is the expected value of the dividend in period \( t \) and \( k \) is the discount rate.

3. Estimating net present value

One solution to the information problem open to the accountant is to give the investor exactly what he wants to know - the value of the firm's common stock. The post World War Two literature on this subject began with a monograph by Sidney Alexander which had the limited objective of contrasting what accountants do in measuring income and wealth with what economists do or at least write about with regard to the measurement of these variables.\(^1\) This monograph was followed by a number of articles and books which proposed and to some extent discussed the implementation of net present value as a basis of measurement in preparing financial statements.

The formidable problems in estimating net present value have led some writers to qualify the objective and propose that value in some limited purpose be the basis of measurement, e.g., value in liquidation or 'exit value.'\(^2\) However, the value figure that investors want is the net present value of the expected future cash flows in the expected employment of the firm's assets and not in one of the numerous alternative uses that are not contemplated or at best are most unlikely to take place.

Such efforts at avoiding the problem of estimating value are understandable. What is required is the estimation of the firm's dividends over all future time and arriving at a discount rate appropriate to their risk. Given the value of the firm at each point in time, the measurement of income is a simple task: it is the change in value plus the dividends paid over the period. The expected value of the income for the coming year is also easy to measure. It is the product \( V_k \), the net present value of the common stock multiplied by the discount rate used to arrive at the net present value. However, as the author has pointed out elsewhere, realized income for the last year under this basis of valuation is determined by the change in the expected future dividends and the change in the discount rate over the year plus the dividend paid during the year. In other words, realized income is the

1. In practice economists commonly use a cost basis of measurement as in the national income and wealth accounts, (see S. S. Alexander 1950).

2. Recently the leading advocates of some variation on value as a basis of measurement in accounting have been R. J. Chambers (1966) and R. R. Sterling (1970).