ANALYSIS AND INTERPRETATION OF FINANCIAL STATEMENTS

(Part 1)

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In hierdie eerste deel bespreek die skrywer die doelwitte van die ontleding en vertolking van finansiële state asook die opstel van die raamwerk waarbinne hierdie ontleding sal geskied. Hy noem sestien verhoudings wat in vyf groepe ingedeel word. Die eerste groep, nl. groeiverhoudings, word hier bespreek. In die volgende uitgawe van hierdie blad sal winsgewendheids-, krediet- en stabiliteits-, uitbetalings- en prysverhoudings bespreek word.

PURPOSES OF ANALYSIS AND INTERPRETATION

THERE are three primary purposes of analysis and interpretation of financial statements:

(1) to determine the degree of success achieved in the profit-making and wealth-maximization functions of the firm,

(2) to attempt to determine the firm's financial condition — its ability to carry on its profit-making and wealth-maximization functions in the future, and

(3) to determine the evaluation of the firm's assets, sales, earnings and dividends by the market.

FRAMEWORD FOR ANALYSIS AND INTERPRETATION

Before looking at the actual ratios it is necessary to set up the framework within which they will be analyzed and interpreted.

Published Company Reports

It is not unusual to hear accountants of the avant-garde or ultra-modern school say "published company reports are not worth the paper they are written on, so why waste time analyzing them."

Unfortunately, there is some truth in this statement due to:

(1) the failure of many managements to understand that the shareholders are the real owners of any company and, as such, are entitled to complete, accurate and consistent information,

(2) the lack of familiarity on the part of many managements with generally accepted accounting principles, and

(3) the failure of the accounting profession to agree on solutions for some important problems.

However, the statement that published reports are "not worth the paper they are written on" is an extreme over-exaggeration. If this were entirely true, then the accounting profession would have accomplished nothing and investors would have no logical reason to invest in the shares of Company A or Company B in preference to the shares of Company Y or Company Z and any attempt to value shares would be futile.

Published figures are often satisfactory and may be used by the security analyst or investor without adjustment. In many instances, however, adjustments must be made to reported figures to bring them into accord with generally accepted

accounting principles or to put companies on a comparable basis.

One major problem for the external analyst or investor (that is the analyst or investor outside a company who does not have access to its books and records) is to obtain sufficient information to be able to make the necessary adjustments. This is particularly true in South Africa where standards of company reporting are shockingly inadequate. If insufficient information is available to make a necessary adjustment, there are two alternatives. First, the adjustment may be treated as a qualitative rather than a quantitative factor, or second, the adjustment may be made on the basis of a rough estimate. For example, if Company XYZ is reporting to shareholders on the basis of accelerated depreciation while other companies with which it is desired to compare XYZ are using straight line depreciation, an adjustment is necessary. If XYZ fails to provide sufficient information to enable the adjustment to be made accurately, we can treat the adjustment qualitatively. Under this approach we make allowance for likely over-depreciation and consequent understatement of profit. In calculating any ratio involving net profit we keep in mind that net profit has been somewhat understated. Alternatively, we might try to estimate the amount of overdepreciation and decide that as near as we can determine XYZ which reported depreciation of R180,000 should have its reported depreciation reduced by approximately R40,000 to R140,000.

There are three main types of adjustments which must be made to reported figures: (1) Nonrecurrent items and noncurrent items should be eliminated from a single year analysis but not from a long-term analysis. Nonrecurrent items are those which are not normally and regularly found in the operating results for each year. Noncurrent items are those which relate to a past year. Some items may be both nonrecurrent and noncurrent, such as the receipt of a substantial sum of money as a result of litigation relating to a claim which arose in the past. Nonrecurrent and noncurrent items do not properly belong in the results of any one year and, therefore, should be removed from that year's results. If this is not done, the single year's results are distorted. On the other hand these items properly belong in the results of a number of years because they relate to the operations of a number of years and, thus, should not be removed from a long-term analysis. Nonrecurrent and noncurrent items include:

(a) payment of back taxes and receipt of tax refunds,

(b) results of litigation and other claims,

(c) profits or losses from the sale of fixed assets,

(d) profits, losses or adjustments to market value of investments, for a non-investment company,

(e) write downs or recoveries of written down foreign assets,

(f) proceeds of life insurance policies collected, and

(g) expense incurred in connection with the the issuance or retirement of securities

(2) Conservatism (or the opposite which we might call, for lack of better terminology, liberalism) should be eliminated. These adjustments are generally most difficult to make, or even to know that they should be made, because of lack of information. Conservatism (liberalism) arises through:

(a) undervaluation (overvaluation) of stock,

(b) undervaluation (overvaluation) of book debts through excessive (inadequate) provisions for doubtful debts,

(c) undervaluation (overvaluation) of fixed assets through excessive (inadequate) provisions for depreciation, and

(d) overstatement (understatement) of taxation.

(3) Where companies are following generally accepted accounting principles which result in

varying published figures, the analyst should restate these on comparable bases. These include different methods of:

(a) depreciation,

(b) valuation of fixed assets, and

(c) inventory valuation.

Arbitrary Guidelines

In considering the adequacy of certain financial relationships, as expressed by ratios, arbitrary guidelines are given. For example in the determination of the sufficiency of current assets in relation to current liabilities, readers are instructed that the old "rule-of-thumb" of 2 to 1 is a starting point, but that depending upon the industry, the company and its method of operations, 1 to 1 will suffice for some companies while 3 to 1 may be desirable for others. Readers are given 2 to 1 as a bench-mark so that they will know that 10 to 1 is not required and that 1 to 10 is not satisfactory.

It is not possible to use 2 to 1 and similar guidelines automatically, but each set of ratios must be considered individually in light of the nature of the particular company and its operations. Ratio analysis is not a mechanical process, but involves the application of common sense, logic and imagination to the particular factual situation.

The Relationship of Ratios

To derive real benefit from the analysis and interpretation of financial statements, it is necessary to have a thorough understanding of the determination of each ratio, its meaning and significance, the factors which affect it and its relationship with other ratios. No ratio is complete in and of itself, but each ratio relates, either directly or indirectly, to other ratios. For instance, earnings per share growth is directly related to net profit growth and indirectly related to sales growth. In a sense many ratios duplicate other ratios by providing the same or similar information. They are used, however, for the purpose of directing attention to various financial aspects to avoid the result which occurred when the three blind men each examined in turn an elephant and arrived at startlingly different conclusions. While sales per rand of ordinary (at market price) really doesn't provide any new information, it is a useful ratio, because it suggests interesting and important relationships between sales, market price, price-earnings ratio, profit margin and rate of return on ordinary shareholders' funds.

The experienced financial analyst can easily recognize some of the simple relationships at a glance. Consider this statement from the 15th July 1966 **Fortune** (p.230) about the 500 largest U.S. industrial corporations. "Their sales last year totaled $298 billion, an increase of 11.8% over the previous year's figures. For the fourth consecutive year the group's profits also rose, last year they were up to $20 billion, a 16.1% increase over 1964." The experienced financial analyst will immediately know that:

(1) sales growth was good,

(2) net profit growth was extraordinarily good,

(3) since net profit growth substantially exceeded sales growth, profit margin must risen substantially, and

(4) since it is most unlikely that the increase in either assets or ordinary shareholders' funds would have been anywhere near as as large as the increase in net profit, it is most likely that both rate of return on assets and rate of return on ordinary shareholders' funds increased substantially.

Trends of Ratios

The trend of any ratio is important and should be carefully noted. If we had determined that the current ratio (current assets to current liabilities) of a particular company should be approximately 2.5 to 1, we would be less dissatisfied with a current ratio of 1.9 to 1 which in the three most recent previous periods had been 1.2 to 1, 1.4 to 1 and 1.7 to 1 than a current ratio of 2.1 to 1 which in the three most

recent previous periods had been 2.8 to 1, 2.6 to 1 and 2.3 to 1.

THE RATIOS

The 16 ratios which will be considered have been divided into five groups: Growth Ratios, Profitability Ratios, Credit and Stability Ratios, Payout Ratio and Price Ratios.

Growth Ratios

Growth ratios measure the growth in activity and in profit. These ratios are of great importance in assessing a company's financial achievements. In our highly complex and competitive business world, few companies remain static, but either expand and grow over the years or stagnate, atrophy and pass from the business scene. Further with the emphasis that today's investors place on growth a company must grow or it will fail to achieve its primary goal, the maximization of the wealth of its ordinary shareholders.

SALES GROWTH

Sales growth is the percentage increase per annum in sales over a number of accounting periods or from one accounting period to the next. Sales growth is significant in measuring the increase in business activity. While a company can increase its net profits over the short-term by efficiencies of operation, such as cost-cutting, no substantial, consistent increases in net profits over the long-term can be achieved without solid increases in sales.

Sales growth is calculated in the following manner:

	1967	1968	1969
Sales	R10,000,000	R12,000,000	R13,000,000
Sales Growth	—	20.0%	8.3%

It is difficult to generalize as to what constitutes a satisfactory sales growth. Unfortunately, due to deficiencies of reporting, little information is available on the sales of South African companies. **Fortune** magazine reports that the sales of the 500 largest American industrial corporations increased by approximately 10% per annum over the past five years. As this was a period of booming business expansion, it is felt that under normal conditions sales growth of from 5% to 7% would be more representative, both in South Africa and in the U. S.

In any particular year a determination of the adequacy of a company's sales increase must consider the performance of its industry. For example, in 1965 in the U.S., sales growth ranged from a high of 19.5% for the automobile industry to a low of 4.5% for the tobacco industry. Under the circumstances, a tobacco company increasing sales by 8% would have turned in a superior performance to an automobile manufacturer increasing sales by 10%.

NET PROFIT GROWTH

Net profit growth is the percentage increase per annum in net profit attributable to the ordinary shareholder (net profit after tax and after any preference dividends) over a number of accounting periods or from one accounting period to the next. Net profit growth is significant in assessing the success of a company in one of its primary objectives, profit-making, over a period of time. While net profit may decline in a recession year, it should increase substantially over the long-term as profits are retained in the business and re-invested in capital expenditure projects to produce greater earnings. Net profit growth would be regarded as satisfactory over the long-term if the profit margin (this ratio is discussed shortly) is maintained and net profit growth matches a satisfactory sales growth.

Net profit growth is calculated in the following manner:

	1967	1968	1969
Net Profit (AT & PD)	R1,000,000	R1,150,000	R1,265,000
Net Profit Growth	—	15.0%	10.0%

EARNINGS PER SHARE GROWTH

Earnings per share growth is the percentage increase per annum in earnings per share over a number of accounting periods or from one accounting period to the next. Earnings per share growth is by far the most important of these three

growth ratios. Sales growth is only relevant in producing net profit growth and net profit growth is only significant when it can be brought to bear on the individual share to produce earnings per share growth. The extent to which earnings per share growth fails to equal net profit growth measures the amount of "dilution" or watering-down of the ownership interest of each ordinary share and is a good test of the financial sophistication of any management. As the earnings per share and the rate of growth of earnings per share are two of the primary determinants of the intrinsic value (real worth) of any ordinary share, it is not difficult to see that the policy of continual regular issuance of ordinary shares with the resultant dilution can only prevent ordinary shareholders form obtaining substantial capital gains.

In the case where additional shares are issued (a) free of charge, (b) to existing shareholders, and (c) in proportion to their holdings (split, bonus issue or stock dividend), there has been no dilution and no **real** reduction in earnings per share. past earnings per share must then be adjusted and computed on the basis of shares presently outstanding.

Example	1966	1967	1968	1969
Net Profit (AT & PD)	R500,000	R600,000	R800,000	R900,000
Number of Ordinary Shares Outstanding*	500,000	500,000	1,000,000	1,000,000
Earnings per Share	R1.00	R1.20	80c	90c
Adjusted Earnings per Share	50c	60c	80c	90c
Earnings per Share Growth	—	20.0%	33.3%	12.5%

*1 for 1 split in 1968

This article will be concluded in a subsequent issue of the journal.

Association News

The following members have been elected:-

SENIOR MEMBERS.

J. D. Bosch.
R. B. Copley (transfer from Member).
M.J. Fourie.
E. Levin.
A. M. Mason.
J. F. Mitchell.
Dr. L. Möckel.
P. A. Olivier.
T. G. J. Pistorius.
W. F. Potgieter (transfer from Member).
J. R. Prinsloo.
A. P. Rademeyer.
J. P. Smit.
W. J. Vosloo.
Dr. A. R. Williams.

MEMBERS.

A. S. Bouwer.
T. J. de Vos.
C. J. du Preez.
F. C. Kotzé.
H. Oosthuizen.
James Smit.
J. T. Thirlwall.

ASSOCIATE MEMBERS.

E. J. Heyl.
R. D. McDonald.
R. R. J. van Rensburg.
W. J. P. van Tonder.

Members with the requisite management experience are advised to submit the necessary form of application for transfer to Senior Membership.