

Some fallacies in financial analysis

A paper given to The Investment Analysts Society of Southern Africa, 28 August 1974

Financial analysis has been described as the interpretation of the financial statements of a company through the use of analytical tools, of which ratio analysis is one of the most important. The main purpose of such analysis is to provide answers to specific questions posed by the analyst.¹ For this reason, financial analysis is not (or should not be) merely mechanistic, but, rather, should be sufficiently flexible to be able to be tailored to specific situations — in other words, to meet the analyst's needs as a creditor, lender, shareholder, manager, or potential investor.

A process of comparison is implicit in all financial analysis in the sense that the results of the company being analysed are compared with some standard or, more usually, series of standards. Generally, the latter comprise some combination of:

- generally accepted norms;
- the results of other similar companies in the same industry;
- the prior results of the company itself.

Clearly, the prime objectives of this comparison are, firstly, to determine the situation of the company in relation to its operational environment and, secondly, to ascertain the emergence of any trends in the results as well as the direction of such trends. This is particularly important in the case of ratio analysis. However, it is through this procedure that many of the major fallacies of analysis arise.

Examining this in more detail:

(1) GENERALLY ACCEPTED NORMS

Ratio analysis abounds with such standards as the 2 : 1 current ratio, the 1 : 1 equity : debt ratio, and the 3 or 4 times coverage ratio. Most of these standards have evolved from practical experience and are reckoned to provide useful rule-of-thumb means of assessing a company's performance.

Unfortunately, these standards usually suffer from two major shortcomings: firstly, constant use over time has tended to invest them with an immutability approaching that of the golden rule. This, of course, disregards the fact that over time standards change as has been illustrated by the events of recent years. Secondly, such standards are extremely generalized and cannot be accepted as applying across the board to all industry sectors. For instance, it would be foolish to attempt to compare the key ratios of, say, a supermarket chain with those of a heavy engineering manufacturer.

A strong case could certainly be made for the use of generalized industry ratios if these were available on a constantly up-dated basis as is the case in the US. However, because no such information is available in South Africa, analysts are forced arbitrarily to vary the standard ratios to approximate industry standards. These variations are usually based on some combination of past experience and subjective judgment and are not necessarily incorrect. Because the standards tend

to be fairly static over time, there must be some doubt as to whether they constitute a valid comparative measure. Even if broadly-based industry standards were available, it must be recognized that their applicability would be restricted largely to mono-industry firms, and would be of dubious value in the case of multi-activity companies such as Rennies or Protea Holdings.

In addition, it must be accepted that there are a number of commonly-used ratios which are severely limited in their application, including:

- the profitability ratios;
- the asset ratios (such as the return on asset ratio);
- the debt ratios;
- the coverage ratios.

Dealing with these in more detail:

The effectiveness of profitability ratios as a measure of a company's operational and managerial efficiency depends on the availability of both the gross and net profits. It is through the interplay of these two ratios that inferences can be made about the competitiveness of the industry, the company's ability to adjust to its environment, and so on.

In South Africa there is no compulsion for a company to publish its gross profit, let alone its turnover. In fact, most companies avoid doing so. This is in marked contrast to disclosure practice in the US where both details are sometimes given on a divisionalized basis. As regards asset ratios, it is generally considered that a high asset turnover (or return on asset ratio) is desirable. In evaluating asset ratios, two factors have to be taken into account. Firstly, all asset ratios place a premium on the use of old assets. This means that a firm using heavily depreciated and relatively inefficient equipment may reflect higher asset ratios than the industry average, though it may actually be losing money. The disclosure requirements of the new Companies Act has not overcome this shortcoming², except insofar as land and buildings are concerned. The detailed information which has to be included in respect of the latter when shown on an historic cost basis is likely to force an increasing number of companies to reflect these assets on a valuation basis instead.

The second factor affecting asset ratios results from the treatment of financial leases. Prior to the new Companies Act, no detail of such leases was required to be disclosed in the annual financial statements. This meant that asset ratios were calculated without regard to the possible impact of leased assets which may not have been of importance some years ago, but certainly is so today. A simple comparison of Triomf's published results with those of other chemical manufacturers will illustrate this point only too clearly.

Although the new Companies Act has made some attempt to force disclosure of lease arrangements, its

requirements are relatively sketchy. All that has to be shown in the annual finance statements are lease charges arising from leases of movable equipment only.³ This means that the capitalised value of the leased equipment can be estimated, though only on a very approximate basis. Furthermore, the Act makes no reference to financial lease contracts in respect of fixed property — in other words, leaseback arrangements. This appears to be an anomaly, particularly when the recent importance of these contracts as a major source of loan funds to companies is taken into account.

Turning to debt ratios, these are mainly used by analysts and lending institutions as a means of assessing the debt capacity of a company. In effect, these ratios provide a crude measure of the financial risk of a company based on its capital structure. The approximate nature of these ratios has to be stressed since neither the extent to which assets are entailed as security for existing loans, nor the effect of financial lease arrangements are taken into account.

As with asset ratios, the latter can be of importance and in this regard it is interesting to refer to a recent American article which analysed the effects of leases on capital structures.⁴ This analysis was based on a study of the 1969 accounts of US domestic airlines and showed that the average long-term debt to equity ratio was 1,47 : 1 prior to taking the capitalized value of leased aircraft into account. Capitalization of aircraft leases had the effect of increasing the average long-term debt by 20% and resulted in the long-term debt : equity ratio increasing to 1,77 : 1. A number of the airline companies had relatively minor lease commitments and a few none at all. However, in the case of one exceptional company, the inclusion of the capitalized lease values in long-term debt had the effect of increasing this liability by almost 250%!

It is because of this possibility that banks and other lending institutions in South Africa have fairly recently started demanding details of financial lease arrangements from borrowers.

The second commonly-used measure of a company's debt capacity is the interest coverage ratio. Conventionally, this reflects the relationship of earnings before interest and tax (EBIT) to the annual loan interest amount, with a multiple of three or four being regarded as a norm. This multiple is assumed to provide a cover against unforeseen fluctuations in the company's future earnings and it is necessary to examine the validity of this assumption.

Clearly the coverage ratio focused on the ability of a company to service the interest liability and does not take the repayment of the debt amount into account. This appears to be illogical. After all, the amount of the principal repayment usually constitutes a far greater drain on a company's cash flow than does the interest charge. In addition and arising from this, since repayment of a loan over, say, five years will be more onerous than if spread over, say, ten years, not only the amount of the loan, but also the repayment period is critical when attempting to estimate a company's debt capacity.

Apart from this, the coverage ratio is based on earnings only which are nothing more than an accounting convention. This is of importance as, in the end, a company's ability to contract debt is dependent on its capacity to generate cash since, generally, all debt

amounts and associated interest charges have to be settled in the form of cash payments.

Recognizing this shortcoming in the conventional coverage ratio, certain analysts have adopted the practice of adding back the depreciation and other provisions to post-tax earnings in order to approximate the cash flow and calculating the coverage ratio on this figure. While this represents an improvement on the conventional approach, it is not really a satisfactory compromise. This approach does not take into account those mandatory and discretionary items (such as capital commitments, dividends, etc.) which are not included in the earnings figure, but which can have a major impact on cash flow.

Since it is obvious that a company's ability to contract debt liability has to be considered in terms of its projected free cash flow (i.e. after deduction of capital expenditure, dividends, etc) and not its pre-tax pre-interest earnings, it is clear that the normal interest coverage ratio is an unsuitable method of approximation. Within approximate limits, it is now possible to project the future cash flow of a company since, under the new Companies Act, full details of long term loans and of capital commitments must be included in the annual statements.⁵

(2) COMPARISON WITH OTHER COMPANIES

From a doctrinaire viewpoint, comparing the results of one company with those of other similar companies requires that the base companies should be similar in all respects; in other words, that their activities and accounting principles should be identical to those of the company being analysed. Reference has already been made to the problem of intra-industry comparison in South Africa. In these circumstances, a satisficing approach is inevitable and this immediately raises doubt as to the meaningfulness of the comparison results.

While the new Companies Act has given legal weight to the requirement that the annual financial statements should conform to generally accepted accounting practice⁶, within the limits of acceptable practice there is still considerable scope for differing treatment of financial information. This, in particular, applies to the following facets of financial statements:

(a) Consolidations

In general, the new Companies Act requires that a company owning more than 75% of the equity capital of another company produce consolidated accounts.⁷ However, if *the directors* consider the information can be more meaningfully presented in some other form, consolidated accounts are not required. In these circumstances, the auditors must report on the directors' decision, but cannot prevent the accounts from being presented in a non-consolidated form.

Where a company owns more than 50% of the equity of another company, it may consolidate the results of that company if it so wishes. Alternatively, it may publish separate financial statements for the 50% — 75% owned company, or include the results in the group report together with the results of subsidiary companies in which the equity holding is between 30% — 50%. In other words, a company which owns more than 50% of the equity of another company may prepare:

- consolidated financial statements ; or
- more than one set of consolidated financial statements ; or
- separate financial statements dealing with the holding company and each of the 50% (or more) owned subsidiary ; or
- annual financial statements for the holding company with statements annexed to those statements expanding on the information contained therein ; or
- any combination of these.

Obviously, the permutations are extensive and merely increase the resultant problems of analysis.

(b) Date of financial statements

A company usually endeavours to select its year-end so that its financial statements will reflect the best possible position. For instance, retail companies, which are heavily dependent on Christmas demand, tend to have an end-December or end-February year-end. It does not necessarily follow that all companies in an industry sector will have the same year-end. Accordingly, since year-ends can differ by up to six months, it is clear that, in these circumstances, inter-company comparisons can be misleading.

Apart from this aspect, it must also be remembered that a public company can postpone releasing its audited results beyond the three months of its year-end stipulated by the new Companies Act.⁸ This can be achieved by publishing the provisional annual statements (which contain the same attenuated information as the interim reports) within the three month period.⁹ There is no further provision in the new Act as to when the final audited statements have to be published, other than that they must be available for the annual general meeting. The new Act requires that this meeting should be held within six months of a company's year-end and not more than fifteen months after its previous annual general meeting. However, under certain circumstances and with the Registrar of Companies' consent, this meeting can be delayed for up to twelve months from the year-end.¹⁰ Obviously, if the currency of information has any bearing on its value, where this situation arises the statements will be of little worth.

(c) Off-balance sheet financing

As previously mentioned, the new Companies Act requires only disclosure of the annual leasing charges of leased movable assets, and makes no provision as regards information on immovable asset leases (whether property, plant, or equipment).¹¹ This, of course, can cause tremendous variations between the results of otherwise identical companies.

(d) Turnover

The Companies Act requires that details of turnover be disclosed either as a monetary amount or in the form of an index or percentage based on the previous year.¹² Several public companies have recently published their results showing turnover on the latter basis which has been justifiably criticised in the press. As the Act makes no provision for disclosure of turnover in the base year, such an index or percentage turnover figure is relatively meaningless.

Perhaps it is necessary to be thankful that even this information is made available. In terms of the new Act, if the directors consider that publication of turnover

information would be meaningless or harmful to the company (and give reasons supporting their opinion) no details need be published.

A further shortcoming of the new Act in this regard is that, although it requires details of divisional profitability to be disclosed, it makes no similar stipulation as regards divisional turnover.¹³ In the case of multi-activity companies, this means that only the crudest approximation can be made of divisional efficiency.

How poorly this contrasts with American practice and, to a lesser extent, that of British companies. As pointed out by Joel Stern in one of his articles in the *Financial Times*, in these competitive communities financially sophisticated managements have come to understand that fuller disclosure of information results in improved market ratings for their companies.

(e) Unquoted investments

In terms of the new Companies Act,¹⁴ unquoted investments may be shown either on the basis of directors' valuation or in very detailed form. It seems likely therefore, that these will be shown at directors' valuation.

However, since the basis of valuation does not have to be disclosed, disparities seem inevitable. These can occur in situations where two companies own the same proportion of the equity of a third company which is not a subsidiary of either of them — in other words, where both companies hold less than 50% of the equity of the third, but include its results in their group reports, if one company values its investment on an entity basis and the other on an equity basis, two totally different values will result.

In South Africa, generally accepted accounting practice is based on exposure drafts issued by the Accounting Practices Committee, plus the bulletins issued by the English Institute of Chartered Accountants and, to a lesser extent, the opinions of the American Chartered Public Accountants.

Within the constraints imposed by these drafts, opinions, etc., considerable variation in the treatment of financial information is permitted. A UK study published in the mid-1960's¹⁵ suggested that there were over one million independent ways of presenting a set of accounts while conforming to accepted practice. Undoubtedly the position has improved since then. However there are still three major items the values of which can vary tremendously depending on the accounting policies adopted ; namely :

- inventory ;
- intangible assets ;
- extraordinary income/expenditure items.

The new Companies Act requires that both the method of valuing stock and the accounting basis used to determine the stock be disclosed.¹⁶ The Act accepts five principal methods of costing (unit cost, fifo, average cost, standard cost, and adjusted selling price). The first four of these methods may be computed differently for partly processed and processed stocks in that cost may be limited to direct costs only or may include all or part of overhead charges.

Given four bases of valuation, five cost methods, and three methods of finding the cost, there are $4 \times 5 \times 3 = 60$ explicitly permitted methods of computing stock values. Clearly, the differences which can result may be considerable. For instance, in a merger between two

major public companies which took place in 1972, it was found that when stocks of ore were valued on a total cost basis the resultant value was almost double that of the results on a direct cost basis.

A related problem exists in the case of uncompleted contracts in manufacturing and construction companies — in other words, contracts which stretch over more than one accounting period. Some companies take no profits into account until the contract has been completed; other companies take pro rata profits into account over the period of the contract; while others bring total profits to account on commencement of the contract. All approaches are acceptable and all conform to generally accepted accounting practice, but can result in spectacular differences.

Similarly, intangible assets such as goodwill, patents, and so on are treated differently by different companies. Conservative companies tend to write off these assets in the year in which they arise; other companies attempt to adopt a matching policy by writing-off these assets over some arbitrarily chosen time period; the remainder capitalize these items at full value and reflect these in their balance sheets thereafter. (This latter policy sometimes appears to be motivated by the hope that these will be regarded as part of the company's capital base.) As with the treatment of profit on uncompleted contracts, all of these approaches are acceptable and all conform to generally accepted practice.

The final items which can be treated in a variety of ways are those clarified as extraordinary income or expenditure. These generally are limited to income or expenditures resulting from prior year activities or to non-recurring receipts or accruals which occurred during the current year. Many managements consider that these items should not be included in the income statement as they give a "distorted" picture of the company's results, and, accordingly, reflect them in the notes to the financial statements. Over time, the interpretation of "extraordinary" has become extremely elastic to the extent that, in general, financial statements are meaningless without a detailed analysis of the notes.

It is because of this tendency that the English Institute of Chartered Accountants recently issued a standard accounting practice opinion requiring that all extraordinary items of income expenditure be included in the published income statement.¹⁷

It is to the credit of the South African Accounting Practices Board that in their first Exposure Draft they recommended that companies' accounting policies should be disclosed in the financial statements. However, as is evident from published results, this information is being shown on so generalized a basis that any necessary adjustments to the accounts can usually only be made by approximation.

(3) PREVIOUS RESULTS

The main objective in analysing the result of a company over several years is to determine the existence and direction of any trends which may be evident. This approach tacitly assumes that the results of one year are comparable with those of another. While this may be quite reasonable in conditions of relatively low inflation, it is clear that when the rate of inflation reaches double figures, comparison with the past results of a company based on historic costs becomes meaningless.

In a memorandum submitted to the Sandilands Commission on Inflation Accounting by the UK Institute of Chartered Management Accounts,¹⁸ it was pointed out that the comparative ratio of pre-tax and pre-interest earnings to capital employed in UK industrial companies between 1951 and 1970 was as follows:

	1951	to 1962	to 1970
Historic cost	23,3%	13,4%	11,5%
Replacement cost	16,0%	10,7%	8,5%

The memorandum went on to point out that a survey conducted by the *Financial Times* of the 1970/1974 company reports of more than 2 500 UK industrial companies revealed that dividends constituted roughly two-thirds of their profits. In other words, in 1970 the average position of these companies was as follows:

	Historic	Cost basis Replacement
EBIT to capital employed	11,5%	8,5%
Less: Company tax at 50% of net historic profit	<u>5,8</u>	<u>5,8</u>
Net profit after tax	5,7	2,7
Less: Distributable profit (two-thirds of net historic profit)	<u>3,8</u>	<u>3,8</u>
Retention/Capital distribution	<u>1,9%</u>	<u>(1,1)%</u>

In other words, even under conditions of moderate inflation, profits can be so eroded by inflation and taxation that, in part, dividends are distributed out of capital. Also, of course, this means that governments are able to increase the amount of tax income without having to resort to the politically unpopular measure of increasing tax rates.

The accounting professions in Europe (and especially in the UK) have attempted to obtain a more realistic picture of a company's results by adjusting for the effects of inflation. This has been achieved by recommending the application of inflation accounting, either in the form of current price (CPP) or replacement cost accounting (RCA.) (The English Institute favours CPP,¹⁹ while other European countries, and particularly the Dutch, prefer RCA). Both methods have their faults and both produce only notional results. Without getting involved in the debate on their comparative merits, it must be accepted that, no matter how approximate, both methods are an attempt to correct the distortions in accounts based on historic cost which are caused by inflation.

Notwithstanding this and the estimated current inflation rate of some 15%, no South African public company has yet published a set of adjusted financial statements, although Stewarts & Lloyds and several other leading companies have announced that they will be doing so in the near future.

Since roughly one-third of the average 34% increase in reported profits in 1974 can be attributed to inflation, it is clear that some form of adjustment is essential. Other considerations apart, such adjustment will highlight the increased tax levels paid by companies after adjusting for stock profits and inadequate depreciation provisions, as well as the proportion dividends constitute of a company's estimated earnings. In addition, it should give a far more precise picture of a company's

future cash requirements — essential information in times when the costs of fixed assets are increasing rapidly and companies are experiencing major liquidity problems.

CONCLUSION

Contrary to the impression which may have been created, this paper was not intended as a criticism of investment analysis per se. Rather, its aim was to re-emphasise the shortcomings arising from the mere mechanical application of analytical techniques in the context of the existing legal framework and the prevailing economic conditions. Because of inflation, the latter has become of such overwhelming importance that, until such time as some form of inflationary adjustment is introduced into South African accounting practice, in general, the published financial statements of public companies have to be viewed as notional rather than as relatively true and fair representations of these companies' financial positions.

References:

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- 2 Companies Act, No. 61 of 1973: Fourth Schedule, Paragraph 16.
- 3 Ibid: Paragraph 36(m).
- 4 Richard D. Greta: "The Impact of the Capitalisation of Leases on Financial Analysis." *Financial Analysts Journal*, March 1974
- 5 Companies Act, No. 61 of 1973: Fourth Schedule, Paragraphs 10(b) and 34.
- 6 Ibid: Section 288(2)
- 7 Ibid: Section 290
- 8 Ibid: Section 302
- 9 Ibid: Section 304
- 10 Ibid: Section 179
- 11 Ibid: Fourth Schedule, Paragraph 36(m)
- 12 Ibid: Paragraph 38
- 13 Ibid: Paragraph 60(1)
- 14 Ibid: Paragraph 21 and 22
- 15 R. J. Chambers: "Financial Information and the Securities Market", *Abacus*, Vol 1/1, September 1965
- 16 Companies Act, No. 61 of 1973: Fourth Schedule, Paragraph 25.
- 17 The Institute of Chartered Accountants in England & Wales: Statement of Standard Accounting Practice 6: "Extraordinary items and prior year adjustments."
- 18 *Management Accounting*, July/August, 1974: "Insidious effects of inflation on company performance."
- 19 The Institute of Chartered Accountants in England & Wales: Provisional Statement of Standard Accounting Practice 7: "Accounting for changes in the purchasing power of money."