

The Financial Analysis of the Published Accounts of Industrial Companies

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Recently I attempted to carry out a comparative financial analysis of twenty-six *indigenous* Northern Ireland public companies. By indigenous was meant companies owned (in the main) and operating from (in the main) Northern Ireland as at the 1st July 1968. All twenty-six companies were quoted on the Belfast Stock Exchange and their selection was largely self-determined.

The analysis was based on an examination of the certified and published financial statements of the twenty-six companies for the period 1962 through 1967, the calendar year indicating for each company the end of its financial year. The consolidated statements of the companies were used in cases where there were subsidiaries.

The data for each company was gathered on a standardized set of forms comprising four parts. Part I contains the Balance Sheet Summary. The latter is broken down into four sections. Section I covers Capital and Reserves, Section II Total Liabilities, Section III Fixed Assets and Section IV Current Assets. A summary of the total of the Balance Sheets was then worked out. This is Current Assets less Current Liabilities which gives the Working Capital. To Working Capital, Fixed Assets including Tangible (net of Accumulated Depreciation), Intangible and Trade Investments, is added to give Gross Total Capital. From the latter, any Minority Interest is taken to give Net Total Capital. The summary sheet concludes by showing how the latter is represented.

Part II of the set of forms is devoted to the Profit and Loss and Appropriation Accounts. This is summarized on a single sheet which shows Income (net of such charges as Director's Fees and Emoluments) minus Depreciation to give Operating Profit. To this figure Other Income (such as Dividends and Interest Received) is added to give Total Income. From the latter is subtracted any Interest on Long-Term Debt to give Earnings Before Tax. Corporation and Schedule F Taxes are then taken away to show the Net Profit, from which Preference and Ordinary Dividends are taken to show Profit-Less-Dividends. Finally, from the latter, any Minority Interest payments are taken to give Retained Earnings.

Part III of the set of forms is a Capital Reconciliation Statement showing concisely the changes in Balance Sheet figures from one year to the next, including the detail of changes in Reserves.

Part IV provides a Sources and Uses of Funds Statement.

To the analysis in respect of each company is appended a Balance Sheet Summary, a Profit and Loss and Appropriation Account, a Ratio Analysis (to be described) and a Statement of Sources and Uses of Funds for the period 1962 through 1967.

Modern business has justifiably been described as a galaxy of diverse relationships. These relationships include those between the individual firm and its creditors, owners and employees. These have in common their interest in the economic welfare of the firm.

If, therefore, it be agreed that "a firm's success and even survival, its ability and willingness to maintain production and to invest in fixed or working capital are to a very considerable extent determined by its financial policies, both past and present,"¹ then, it must be recognised that "financial analysis helps the manager or outside analyst appraise management performance, corporate efficiency, financial strengths and weaknesses, credit worthiness and other aspects of a company, division or other financial unit based upon its past performance."²

The output of a computer is as good as its input. However, what is true of the computer holds for analyses based on the certified and published financial statements of companies. Commenting on this "input" in a *Fortune* article in 1967, Robert Ball states "Most companies abroad [from the United States] dole out the truth in meagre helpings"³. Ball comments further:

The policy of keeping stockholders—and the general public in the dark is increasing out of step with the times. Just when corporations are expanding fast and are hungering for new capital, the tradition of secrecy discourages potential investors. A Zurich banker observes, "On the basis of published figures it is impossible to make accurate comparisons of the performance of different companies in the same industry and thus to decide what shares are most attractive. Critics are quick to admit, however, that the trend is increasingly toward opening the books. In a number of countries, the law is getting tougher about disclosure requirements. And many corporations, recognising the growing need to tap capital markets and to turn the spotlight on management performance are voluntarily giving shareholders and the public more information than the law requires"⁴.

The 1960 Report of the Company Law Committee—otherwise known as the Jenkins Report—reiterated what an earlier committee had said:

The primary purpose of the annual accounts of a business is to present information to the proprietors showing how their funds have been utilized and the profits derived from such use."

For the private company and indeed for the public company, where ownership is largely synonymous with control—some fourteen companies in this sample of twenty-six—this proposition is met without publishing

¹ Irwin Friend, *What Business Can Do to Prevent Recessions from Problems in Anti-Recession Policy* (New York Committee for Economic Development, 1954), page 6.

² Erich A. Helfert, *Techniques of Financial Analysis* (Illinois Richard D. Irwin Inc., 1967), page 2.

³ Robert Ball, *The Declining Art of Concealing the Figures*, *Fortune*, September 15th, 1967, page 137.

⁴ Robert Ball, *op cit*, page 137.

the accounts in any depth. However, for the public company where shareholdings are widely spread and as a consequence ownership is not synonymous with control, publication of "full" financial statements is a fundamental pre-requisite of the proposition. Such companies have much to gain from publishing well-conceived and carefully drafted final accounts. Batty has listed the following benefits:

- 1 Would-be investors are able to see the nature of the company's activities in a favourable manner
- 2 Company accounts receive free publicity in the financial columns of newspapers, etc
- 3 Suppliers of raw materials, fixed assets, and services often assess creditworthiness from a company's accounts. Accordingly, the more attractive the layout and presentation of the information, the greater will tend to be the confidence of the would-be creditors
- 4 Banks and other financial institutions use the final accounts to assess the financial standing and present worth of the business. Well drafted accounts are likely to be viewed with greater favour than those that are ambiguous and/or fail to disclose vital information."⁶

The Jenkins Committee was appointed to study further reforms in the Company Law and its recommendations were incorporated in a new law that went into force in Great Britain in 1967. British companies must now report product sales and earnings, broken down by product groups and must disclose the value of exports, directors' emoluments and their shareholdings and inside dealings as well as the sums contributed to charities and political parties. All enterprises must reveal holdings of 10% or more in other companies.

Unfortunately for the outside analyst, whether he be an investor, a creditor or an academic, the Northern Ireland Government has chosen not to implement the 1967 Westminster Act in Northern Ireland. Instead, after some two years' delay, in September of this year, the Government set up a Committee "to review company law in Northern Ireland in the light of changes made in the law in Great Britain since 1960." The Committee has begun to collect evidence.

Currently, therefore, the minimum disclosure requirements of the Northern Ireland Company Law are at a lower level than those for the rest of the United Kingdom. What this analyst missed in particular was the non-publication of turnover figures by some nineteen out of a sample of twenty-six companies. To their credit, seven companies out of the nineteen provided their turnover figures on a promise of confidentiality. However, it must be emphasised that the lack of detailed disclosure in the published financial statement of Northern Ireland public companies severely inhibits the outside analyst.

⁶ J Barry, Management Accountancy, 2nd Ed, page 497

Methods of financial analysis may be classified in two ways. Static analysis is the analysis of the financial data of a firm as at a given date or for a given period. Dynamic analysis involves comparison of the original data or derived measures of one date or period with those of another date or period.

Analysis presupposes interpretation. But as Chambers has pointed out, interpretation is not an arithmetical process.

It [i.e. interpretation] involves thinking in terms of the realities which lie beneath the abstract book figures alone. The limitations of conventional accounting are to be recognized and allowances are to be made for them in deriving conclusions. Informed judgement and imaginative reasoning play an important part in interpretation.⁷

When examining financial statements and the measures derived from them, some criterion is adopted, tacitly or overtly, of what constitutes a satisfactory condition or a satisfactory trend. Some such criteria arise from what is known as normal business practice. For example, it is unusual for creditors knowingly to advance money or goods to a trader in excess of the latter's own equity in his company. Other criteria arise from past experience and past performance.

It is not merely a tautology to say that a growth company is a company which grows. To want to do better this year than in the previous year is a solid Classical economic assumption. The previous year, or some average of the previous years may thus be the criterion, increases in turnover, in profit, in net assets, may be considered as satisfactory indications of growth. However, it must be noted that the rate of profit, the aggregate sales, the rate of stock turnover may be better in one year than in the previous year—satisfying the criterion of past performance—but they may be far from satisfactory in the light of the company's trading conditions and the performance of its competitors.

The difficulties of establishing criteria are greater when the figures of one period alone are available. For this reason, the practice of giving the previous year's figures in published financial statements was adopted and is now obligatory under U.K. Companies Acts.

It is the examination of changes in financial data and changes in derived measures, for example, Ratio Analysis, which is the most useful method of analysis, especially when it is done on a comparative basis. Such dynamic or trend analysis by-passes the problem of determining criteria, which is one of the main difficulties of static analysis.

Chambers comments

Interpretation becomes a matter of deciding whether the observed changes have been in the direction necessitated by the circumstances of the firm, not a matter of deciding whether the observed deviation from an hypothetical norm is a material deviation.⁸

As to the length of the period considered, a period of six years—despite the dynamic and ever-changing environment of business—seems an

⁷ Raymond J. Chambers, *Financial Management*, page 224

⁸ Chambers, *op cit*, page 226

acceptable period for the purposes of this analysis

In the research referred to three separate and distinct tools of financial analysis were applied to the data collected in the format described above in respect of each company first, Ratio Analysis, secondly, an analysis of the company's Sources and Uses of Funds, and thirdly, trend analysis. The latter type of analysis is implicit in both Ratio and Sources and Uses of Funds Analyses

RATIO ANALYSIS

When the analyst concerns himself with the financial facts of a business, he asks questions about its ability to meet current obligations, the true worth of its various assets, the extent and character of its liabilities, its resourcefulness and ability to earn a fair return on its investments, its ability to withstand possible setbacks from external or internal sources, its ability to raise new funds when needed and so on

The analyst's viewpoint and approach will differ somewhat, depending on his purposes. But whether he be the manager of the company, a creditor or owner, he will wish to make certain tests and apply certain standards in order to be able to rank, classify and judge the merits of a company by comparing it to relevant averages of other similar companies

Financial reports and statements can give few absolute figures of value in themselves. Batty comments

"Absolute figures may be misleading unless compared one with another. Ratios provide the means of showing the inter-relationships which exist"⁹

All methods which express relationships between selected balance sheet or income statement items are methods of ratio analysis. The terms related may be drawn, both from the balance sheet, or both from the income statement, or one of the terms may be taken from each statement. It is the view of the Centre for Interfirm Comparisons that "maximum information is dependent upon ratios, i.e. the measurement of relationships"¹⁰

The data from which the ratios are derived must be related in some logical way. The Centre for Interfirm Comparisons elaborates

Relationships of figures must be based on relationships in fact, and the closer the relationship in fact the better the ratio. Aggregate figures should accordingly be linked with the detailed figures of the functions that bring such final figures about, figures of functions with those of other functions that are comparable so as to reveal comparative significance in aggregate figures."¹¹

Ideally speaking

Ratios should be presented in sequence. Ratios of primary figures should precede and prepare the ground for ratios of complex figures, which in turn will lead to composite ratios."^{11a}

⁹ J Batty, *op cit*, page 395

¹⁰ British Institute of Management, Information Note 61, Financial and Operating Ratios, page 1

¹¹ and ^{11a} British Institute of Management, *op cit*, page 2

The principle assumption of the use of ratios is that the past is relevant to the future. The results of ratio analysis must always be interpreted with an eye on non-recurring transactions and in the light of general business conditions, and care must be taken not to place too much reliance on the results of any single year. The use of ratios is limited to the extent that in respect of any company there are certain non-quantifiable elements, for example, pending government contracts. In addition, the careful analyst will keep an eye on the accounting methods used, for example, marketable securities may be being carried at cost, the value of land may be understated, and liabilities such as leases or pensions may not be clearly stated. Comparisons of ratios from year to year can only (and must) be based on absolute figures the composition of which is the same.

In the research referred to use was made of some sixteen ratios compiled and published by Dun and Bradstreet. These ratios were derived from a sample of about 500 accounts of U.K. companies which published turnover figures in 1967. The size of the sample has increased with each edition and the passing of the 1967 Company Act has greatly enlarged the scope of the publication. The method of compilation and calculation is as follows: first, the companies are allocated to their appropriate industry groups, which are based on the Standard Industrial Classification, secondly, the ratios are computed for each company, thirdly, the ratios as computed for each company are then sorted into their industry groups and allocated to the year in which their financial year ends, fourthly, each series of ratios is arranged in numerical order, so that the highest ratio is at the top and the lowest is at the bottom, the ratio that falls in the middle of the series is the "Median" of the series, the ratio half-way between the highest and the Median is the "Upper Quartile", and the ratio half-way between the Median and the lowest is the "Lower Quartile".

The purpose of the ratios presented by Dun and Bradstreet in its *Business Ratios* publication and used in this report is, first to enable firms to compare their performance and liquidity with those of the average and above-average firms in their particular industry or trade, and, secondly, to help them identify possible operating or financial areas in which there is room for improvement.

Now Dun and Bradstreet admit that their ratio exercise has its limitations. The Centre for Interfirm Comparisons believes that these limitations are mortal blows.

"Can a firm evaluate its profitability and performance by comparing its return on capital, its profit margin on sales, its stock turnover, and other such ratios with corresponding figures calculated from the published accounts of other firms in its industry? The answer is NO"¹²

(Note: Capitals are the Centre's)

The following is a summary of the Centre's case

"... figures from the published accounts of different firms are not likely

¹² Centre for Interfirm Comparisons Ltd, *Published Accounts*—"Your Yardsticks of Performance, page 1

to be comparable. Because different firms will use different definitions and different valuation principles in arriving at their profit, cost and profit figures. For example, with present conventions about the valuation of assets on the basis of depreciated original cost, the fixed asset figures and, therefore, the capital figures of firms are not likely to be comparable. This follows from the fact that each of them will probably have acquired its plant and other fixed assets at different periods (and, therefore, at prices representing different money values), and also from the fact that depreciation practices vary considerably from firm to firm. Also, as there are considerable differences between the year ends of firms, so the data of different balance sheets will reflect the influence of different periods.

Similar question marks hang over many other important items such as the valuation of current assets, sales, production costs, stocks, which can be treated differently by different firms, resulting in published profit and capital figures which are not comparable. Therefore, ratios calculated from such non-comparable figures are themselves not comparable.

2. But even if the figures from published accounts were comparable they would not cover even the minimum set of figures needed to help a firm in evaluating its performance by e.g., establishing why its return on capital differed from that of other firms. Among the data required would be ratios relating specific cost items to sales, or sales value of production, as well as detailed stock turnover ratios, showing for instance, material stocks, work in progress and stocks of finished goods in relation to sales, which information is not usually provided in published accounts.
3. Even if sufficient accounting data were available on a comparable basis, they would not by themselves really enable a firm to draw valid and practical conclusions from differences between its own figures and those of other firms, because such differences would be due to differences in the policy, structure, methods of organisation of the firms concerned, subjects on which no information is given or ever likely to be given in published accounts.
4. Published average industry ratios are built up from non-comparable figures of individual firms, these figures do not become more comparable by being averaged, furthermore, these published ratios are likely to reflect operations and activities of firms which are not comparable with those of the firm wishing to use the published ratios, nor can such published ratios give information about the policies of the firms whose published accounts were used in calculating the average ratios.
5. Published industry average ratios cover too wide a spectrum of types of firms within the same Standard Industrial Classification. Within the Standard Industrial Classification "Non-Electrical Engineering" would a manufacturer of, e.g., "pumps and compressors", wish to compare his firm's stock turnover with an average ratio reflecting

the policies and performance of rolling mills, makers of office machinery and some of the others included?

- 6 In the United States, aggregate ratios are published by different agencies which cover the same industries. Examples can be given which show that *different* average ratios for the *same* industry and the *same* year are published by these different agencies. Which of these different figures is the individual firm to use as yardsticks for its own performance?"¹³

For these reasons, it is the Centre's belief that a firm cannot evaluate its performance by reference to the published data of other firms in its industry, but it can if it wishes, obtain *comparable* data and adequately interpret data of other firms by taking part in a properly conducted interfirm comparison. Each of the participants in the Centre's scheme contributes anonymously on a voluntary, agreed, uniform and confidential basis certain figures, as well as background data relating to its policy and operations. The Centre, having checked the figures contributed by firms for accuracy and consistency uses them to calculate ratios which are carefully chosen to cover the major factors likely to cause a firm's return on capital to differ from that of others in its industry.

The above limitations must be recognized.

"different accounting practices between companies are bound to affect comparisons. To be meaningful, not only must the figure in the balance sheet and profit and loss account be realistically valued, but, when comparisons are made between firms, there should, as far as possible, be uniform definitions of terms. In addition, the constituent firms should be broadly the same size, supplying comparable products and competing under similar market conditions. *It would be foolish to pretend that our [i.e., Dun and Bradstreet's] come near to satisfying all these criteria*"¹⁴

The recent Pergammon case has focused attention on the fact that accounting practices are neither uniform between companies nor, indeed, between accountants. However, the problem is not a new one.

There do presently exist unnecessary differences in accounting practices which create needless difficulties in comparing the performance of individual companies. To the extent that we can remove these unnecessary differences, we can contribute to the effectiveness and understandability of the reports and analyses which we accountants prepare. In addition, we cannot ignore the pressure from the financial community for improved comparability, and we should attempt to meet this demand in the most orderly and effective way possible"¹⁵

Now it cannot be denied that the Centre, through its promise of confidentiality, does promise its participants a higher degree of uniformity and thus of comparability than does Dun and Bradstreet's Business Ratios.

¹³ See Centre for Interfirm Comparisons, *Published Accounts—Your Yardsticks of Performance*, 1968.

¹⁴ Dun and Bradstreet, *Business Ratios*, Autumn 1966, page 20.

¹⁵ Donald P. Jones, *Looking Ahead in Financial Management*, *The Financial Executive*, October 1966, page 54.

However, the Centre does not achieve complete uniformity and comparability for there will always be differences that should be recognized in accountancy practice—differences in conditions, in business policies, in management attitudes and in expectations that must be reflected in a company's financial statements

It should also be recognized that the Centre's case is relevant only to the needs of management and not to those of owners or creditors. The analysts for the latter are compelled to rely in the main on the published accounts of public companies and do not have available to them confidential data.

It is then Dun and Bradstreet's belief that the above limitations are not mortal blows to their Business Ratio service and that

“ despite these limitations the ratios, if intelligently interpreted, can provide valuable yardsticks for comparisons of performance and creditworthiness ”¹⁶

for the higher management of a company, its owners, creditors and any financial analyst who may be interested

The 1967 Company Act (G B) has compelled public companies to disclose critical information such as turnover figures and product break-downs. This in turn has permitted Dun and Bradstreet to enlarge its sample and to more narrowly define its industry groups. However, this is still a problem. This analyst found difficulty in placing Gallaher Ltd, Harland and Wolfe Ltd, and Ulster Television Ltd, in industry groups as defined by Dun and Bradstreet. Also, developments in information processing technology should greatly enable such organizations as Dun and Bradstreet to provide a better quality service (i.e. reduce the above limitations) and, equally important, to provide it more often.

“The scope of ratios generally is no more significant than their limitations. They are evidently no substitute for judgement, they are clues rather than conclusions. They incite, explain and emphasize, but they never prove”¹⁷

Thus management, in reading this analyst's application of the ratio comparisons to his company is warned that though ratios, if intelligently interpreted, can provide valuable yardsticks for comparisons of performance and creditworthiness, they are nevertheless no substitute for judgement.

In financial analysis, ratios are generally classified into four fundamental types

- 1 LIQUIDITY RATIOS, which are designed to measure the ability of the firm to meet its maturing short-term obligations,
- 2 LEVERAGE RATIOS, which measure the contributions of owners as compared with the financing provided by the firm's creditors,
- 3 ACTIVITY RATIOS, which measure how effectively the firm is employing its resources,

¹⁶ Dun and Bradstreet, *op cit*, page 22

¹⁷ British Institute of Management, Information Note 61, Financial and Operating Ratios, page 1

- 4 **PROFITABILITY RATIOS**, which measure management's overall effectiveness as shown by the returns generated on sales and investment¹⁸

The choice of one or more of these types of ratios is determined by the purpose of the analysis. For example, long-term creditors take an intermediate position between short-term creditors, who look to the Liquidity Ratios, and long-term equity investors who emphasize earning power and operating efficiency, long-term creditors will wish on the one hand to satisfy themselves as to the firm's ability to meet its short-term obligations to its creditors and on the other hand that the firm's Leverage Ratios are satisfactory.

In the research referred to, the business ratios as compiled and provided by Dun and Bradstreet for different industry groups were applied to each company. In 1963 and 1964, Dun and Bradstreet used twelve business ratios plus three growth indices for fourteen main U.K. industry groups.

Their Summer 1968 publication provides for 1965, 1966 and 1967, thirteen business ratios (Net Worth over Total Assets takes the place of Sales over Net Worth and Collection Period in Days is added) plus the three growth indices for twenty-seven industry groups. (Note: The full rigour of the 1967 Companies Act did not become effective until the first annual return made up to a date after 26th January 1968. However, Dun and Bradstreet's Winter 1968 edition shows that an increasing number of quoted public companies provided voluntarily turnover data for 1966 and 1967.) The sixteen ratios (i.e. thirteen ratios plus three trend indices) employed by Dun and Bradstreet in 1965, 1966 and 1967 are as follows:

I Ratios 1 to 3 TREND INDICES

1 TREND OF SALES

This ratio measures the growth in turnover produced from one year to the next.

2 TREND OF PROFITS

This index measures the percentage change in profits earned from year to year.

3 TREND OF ASSETS

This ratio measures the growth of resources controlled by a firm from one year to another.

II PRIMARY AND EXPLANATORY RATIOS OF INTEREST TO ALL PARTIES

4 PROFIT TO NET ASSETS

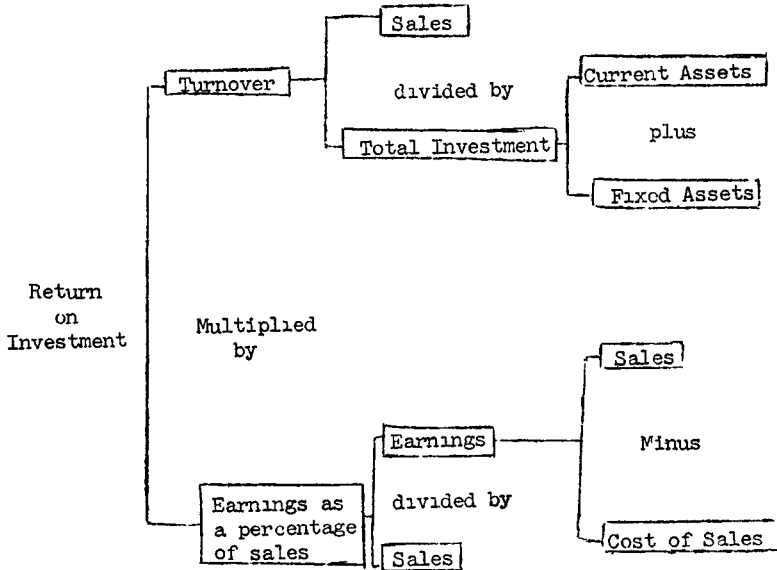
This ratio tends to be regarded as the primary ratio. In so far as a satisfactory return on assets is the long-run objective of the business, this ratio indicates how successfully a company is utilizing its assets. (For some cautious words regarding the return on capital and the limitations of conventional accounting, the reader is referred to

¹⁸ J. F. Weston and E. F. Brigham, *Managerial Finance*, 2nd Edition, page 67.

John Argenti's article Regins Vs The Return on Capital in Management Today, June 1968)

5 PROFIT TO SALES RATIO

The Profit to Sales Ratio assesses the relationship between a firm's income (sales) and its costs (expenditure) In conjunction with Sales to Net Assets Ratio—Ratio 6 here—this ratio helps to explain variations in the company's return on capital (Ratio 4) In terms of the Du Pont System of Financial Control, this relationship can be seen quite clearly¹⁹



It should however be noted that whilst this diagram explains the logic of the relationship, the logic also of the Profit to Sales Ratio and indeed of the Sales to Fixed Assets Ratio (Ratio 7) and of the Sales to Net Current Assets Ratio (Ratio 8), nevertheless, the definitions used are not always the same

As the Profit to Sales Ratio assesses the relationship between Sales and Costs it can be said that a high Profit to Sales Ratio suggests that costs have been kept down by efficient production and administration

6 THE SALES TO NET ASSETS RATIO

The Sales to Net Assets Ratio shows how fully a company is employing its capital As stated above, along with the Profit to Sales Ratio (Ratio 5), this ratio helps to explain variations in the return on capital (Ratio 4) From a performance viewpoint, the more intensively capital is utilized the better provided that costs are not artificially inflated to achieve this

¹⁹ Eugene M Lerner and William T Carleton, A Theory of Financial Analysis page 16

III RATIOS 7 to 10 PERFORMANCE RATIOS OF PARTICULAR RELEVANCE TO DEPARTMENTAL MANAGERS AND FINANCIAL ANALYSTS

7 THE SALES TO FIXED ASSETS RATIO

The Sales to Fixed Assets Ratio along with the Sales to Net Current Assets Ratio (Ratio 8) helps to explain the Sales to Net Assets Ratio (Ratio 6) If Net Assets are being more intensively employed, it must be because either Fixed Assets or Net Current Assets or both are being turned over faster Normally, the higher the Sales to Fixed Assets Ratio the more efficiently plant and equipment is being utilized

8 THE SALES TO NET CURRENT ASSETS RATIO

From a performance point of view, the faster working capital is turned over the better But for a creditor, too fast a turnover is a danger signal Any sudden drop in income or slow payment by debtors might find the company short of cash to meet its creditors Hence this ratio can provide an early warning of pressure on liquidity

9 THE SALES TO STOCK RATIO

The Sales to Stock Ratio, known as the Stock Turnover Ratio, indicates whether a company's stocks are justifiable in relation to its Sales A high ratio reveals the ability of a company's management to move its merchandise quickly

Note Ratios 7 to 9 may be called Activity Ratios

10 THE FIXED ASSETS TO TOTAL ASSETS RATIO

Fixed Assets generate Sales and hence Profits so that usually in manufacturing industry at least, the higher this ratio the better

It should perhaps be noted at this point that

"There is often a conflict between the performance and credit standing of a company This is basically because a company seeking a maximum credit rating will aim to maintain a high degree of liquidity in its assets structure while a company concerned solely with performance will prefer a high proportion of revenue-producing assets, and the highest possible turnover of them"²⁰

IV RATIOS 11 to 13 CREDITOR RATIOS OF PRIMARY CONCERN TO CREDIT EXECUTIVES AND ACCOUNTANTS

11 THE CURRENT RATIO

The Current Assets to Current Liabilities Ratio is used by creditors as a guide to the strength of a company's Working Capital

However, the Current Ratio does have the drawback that it treats all current assets as being equally liquid This can be misleading as inventory valuations are not necessarily a true guide to saleable value Thus

12 THE LIQUID ASSETS TO CURRENT LIABILITIES RATIO

Foulke puts the point succinctly

"When creditmen began to question the implicit efficacy of [the] Current Ratio [used singly], a second simple supplemental comparison

²⁰ Dun and Bradstreet, *Business Ratios*, Summer 1968, page 25

came into existence the comparison of the total of cash, of marketable securities, when they were known to be absolutely liquid, and of receivables, with the current liabilities. If the Current Ratio was 'two for one' or better and the total of cash, marketable securities, and receivable equalled or exceeded the current liabilities, a balance sheet was said to give double assurance of sound credit soundness. Where cash, marketable securities and receivables were less than the current liabilities, some doubt was thrown on the inherent 'current' strength of the balance sheet no matter how high the Current Ratio happened to be. This second comparison came to be known as the 'acid test'. It gave added prestige to receivables as a realizable asset and less to inventory. This was a natural conclusion, as the inventory in all except those retail stores that transact business solely on a cash basis must first be converted by sales into receivables and then from receivables into cash."²¹

The Liquid Ratio is therefore the same as the Current Ratio but with the Stock removed from the Current Assets, it shows the cover afforded to short-term creditors in the form of Current Assets which can be turned quickly into cash, and is perhaps the best single measure of the liquidity of an undertaking. However, it should be used with caution, for if a firm's Stock varies seasonably, so too will its Liquid Assets.

This brings us to the importance of the Stock component in Working Capital

13 STOCK TO NET CURRENT ASSETS RATIO

If this ratio is too high, the likelihood is that the stocks carried are too large in relation to the financial resources of the business. On the other hand, too low a figure could indicate that the company is holding an unnecessary amount of cash, or is too slow in collecting its debts, i.e. its receivables are too high.

14 CURRENT LIABILITIES TO NET WORTH

This ratio contrasts the funds that creditors temporarily have at risk in the form of a company's debts with the funds permanently invested by its owners. Since the invested funds, i.e. the tangible net worth, serve to guarantee the liquidation of creditor liabilities, it is evident that the smaller the tangible net worth and the larger the liabilities, the less security do creditors normally have. Again, Foulkes puts the point well.

"As liabilities expand, the point finally arrives when an enterprise becomes more and more dependent in its daily operations upon the attitude of its creditors. In a very practical manner, as liabilities increase above a certain level, the management has more and more difficulty in meeting its financial obligations on scheduled time. Bank loans must be renewed and renewed. Trade payments drift from discount to prompt, then from prompt to a few days slow, finally payments run 30, 60 and 90 or more days past due. Somewhere along this rocky route, with progress becoming even more onerous, the

²¹ Roy A. Foulke, *Practical Financial Statement Analysis*, 5th Edition, page 179

banker, if he has a sufficient grasp of the situation, arranges to obtain adequate security to protect his extension of credit. Then the mercantile creditors must decide, one by one, whether they will continue to extend credit on the same basis which they have been using, give special terms or petition the enterprise in bankruptcy."²²

This ratio, therefore, evaluates the protection offered to creditors of a business by its owners. However, when considering this ratio long-term liabilities, reflected indirectly in the next ratio should also be taken into account.

15 NET WORTH TO TOTAL ASSETS

This ratio shows the proportion of the assets attributable to ordinary and preference shareholders as opposed to those set aside for liabilities of all kinds. All things being equal, the higher the proportion of Net Worth, the safer the company from the point of view of creditors.

16 THE COLLECTION PERIOD

This ratio shows the average number of days taken by the company under analysis to exact payment from trade accounts and notes receivable.

The Collection Period in days is obtained by dividing Debtors by Sales and multiplying by 365.

The definitions of the terms in these ratios are as follows

DEFINITIONS OF TERMS USED

Net Assets

Fixed Assets PLUS Current Assets LESS Current Liabilities

Fixed Assets

Tangible fixed assets (net of depreciation) PLUS trade investments PLUS investments in unconsolidated subsidiaries

Current Assets

Stock PLUS trade and other debtors (LESS provision for bad debts) PLUS cash and securities

Current Liabilities

Bank overdrafts or loans PLUS trade creditors and accruals PLUS other short-term creditors PLUS liability for current taxation

Liquid Assets

Current Assets LESS Stock

Stock

Stock, plus work in progress, LESS receipts on account of uncompleted contracts

Net Current Assets

Current Assets LESS Current Liabilities

Net Worth

The balance sheet value of assets available for preference and equity shareholders on a break-up, Net assets LESS long-term loans LESS future tax reserves LESS minority interest in subsidiaries

²² Roy A. Foulke, *op cit*, page 207.

Profit

Operating profit and other income AFTER depreciation but BEFORE interest charged and deduction of tax

Sales or Turnover

Value of output as reported by the company (companies themselves adopt slightly varying definitions)

Total Assets

Fixed Assets PLUS Current Assets

Above it was stated that ratios are no substitute for judgement that they are clues rather than conclusions. But of course to be clues they must be recognized as such. Assume that the analyst is asked to do a ratio analysis for the management of a company using its published financial accounts, management must examine the analysis as presented to him and answer objectively the following questions: first, has the data as presented in my accounts been correctly compiled by the analyst? (If the answer is in the affirmative) secondly, does the Dun and Bradstreet industry classification to which my company is said to belong or approximate, offer a valid comparative base for my company's performance and liquidity? And finally, if it does offer such a comparative base, does the analysis help me to identify possible operating or financial areas in which there is room for improvement? All this pre-supposes, of course, that the management of the firm analysed is persuaded that interfirm comparisons ratio is a useful exercise. If, however, he has doubts, let him remember that for the owner (of shares) and the creditor, ratio analysis sheds more light than it hides.

SOURCES AND USES OF FUNDS ANALYSIS

This is the second tool of financial analysis which was applied to each of the twenty-six companies in the sample.

The net effect of management decisions regarding investment and disinvestment, raising and repayment of funds is a continuous day-to-day flow of funds back and forth between the investment uses and the generating sources, with the aim of achieving liquidity and profitability objectives. The financial manager and the analyst both are interested in this flow because it helps them appraise the impact and quality of the management decisions made in the business during a given period of time. An analysis of funds flows for any relevant period will show where management decided to commit funds (uses), where to reduce its investments (sources), where to acquire additional funds (sources) or where to reduce claims against the firm by giving up funds in payment (uses). Through an arrangement of these changes in a meaningful way, the manager or analyst can judge whether the decisions made in the firm resulted in "normal" movements, as reflected in past experience of the company, in its forecasts or in comparative industry data, or if there were abnormal or interesting flows of funds which invite closer scrutiny.²³

²³ Erich A. Helfert, *op cit*, page 3

The flow of funds through a company is a continual process and at every step along the way each source of funds must be matched by an application, or use of those funds. This is the underlying logic of the whole system in accountancy of double-entry bookkeeping.

To generalize, "Sources of Funds" are those transactions which (1) increase liabilities or capital or (2) reduce assets. Uses of Funds are those transactions which (1) reduce liabilities or capital or (2) increase assets. Total Sources are, of course, equal to total "Uses." To examine these transactions in greater depth

SOURCES OF FUNDS

In any business enterprise, funds come from four sources

1 *The Earnings of the Business*

The sale of merchandize for more than cost plus the everyday operating expenses of a business, usually provides an increase in assets or a decrease in liabilities by the amount of the net profit. In other words, the net profits are reflected in an increase of the [retained earnings] account, a corresponding expansion must take place in the assets, a corresponding reduction must take place in the liabilities or a partial change must take place in both the assets and the liabilities.

2 *Increase in Liabilities*

An expansion in liabilities indicates an increased use of borrowed funds, or as in the case of merchandize purchased on credit and accrued expenses, a temporary withholding of cash until the liability is met.

3 *Decrease in Assets*

A decrease in assets may include a liquidation in current assets, the sale of fixed, miscellaneous or intangible assets.

4 *Contribution of Funds*

This is not an everyday occurrence in a business. When it does occur, it usually takes place in the form of a direct investment of additional capital.

USES OF FUNDS

Funds obtained from the four Sources described above may be employed for or applied to the following four Uses.

1 *A Net Loss of the Business for an Accounting Period*

Where a loss has been assumed funds have gone out of the business. A net loss must be offset by either a decrease in assets or an increase in liabilities, either or both of which would be the source of funds to provide for this particular use of funds.

2 *Decrease in Liabilities*

A decrease in liabilities indicates that funds are being taken out of a business, for example, by decreasing the cash, by collecting receivables or decreasing the stock.

3 *Increase in Assets*

An increase in assets may be an increase in current, fixed, or miscellaneous and intangible assets where they are obtained by acquisition

4 *Decrease in Capital Funds*

In the case of public companies, a decrease in capital funds is defined as dividend payments

Statements showing the Sources and Uses of Funds are comparatively rarely included in the published financial reports of British public companies and by none in this sample of twenty-six Northern Ireland public companies, but are a common feature in the reports of American public companies

In its simplest form, the statement is a straightforward analysis of the change in opening and closing balance sheet figures during a period. In such cases, no information is given which is not already available to one studying the balance sheet, but it presents the information in a convenient form and draws attention to changes in balance sheet figures, and the flow of funds may well be more important than the closing figures viewed in isolation. For example, it might draw attention to the fact that increased bank overdraft facilities had been mainly used for reduction of creditors and increase of stock.

The objects and advantages of the employment of Source and Use of funds statements, in external and internal reporting, are said to include some or all of the following

- 1 Indication of the results of *current* financial management, ignoring past decisions affecting the use of funds already sunk
- 2 Emphasis on the most significant financial changes in a period
- 3 Showing how a particular project has been financed, or how a company which is still in an exploratory or developing stage has provided and applied its funds
- 4 Showing how general expansion in a business has been financed and illustrating the relationship between retained profits, distribution and new capital or borrowings

FINAL COMMENTS

This piece of research was undertaken in the perhaps very obvious belief that financial analysis helps the analyst, whether he is an insider or an outsider, to appraise management performance, corporate efficiency, financial strengths and weaknesses, credit worthiness and other aspects of a company based upon its past performance relative to that of its competitors.

It is obvious that detailed disclosure in published financial statements is a fundamental prerequisite of sound financial analysis by outsiders. In a public company where ownership is synonymous with or approximates closely to control, i.e. management, the owners may ask "Why should our turnover figures be published?" and, if they wish, to add, "it is nobody's

concern but our's" There are at least three replies to this question and the subsequent comments

- 1 Presumably, no company becomes a public company unless it sees some advantage in so doing. If it does not wish to face the responsibility of disclosure of financial detail then this is in itself a factor in deciding whether or not to become a public company. The fact that there is and will continue to be further pressure from governments and the financial community towards fuller disclosure does not alter this principle to go public has responsibilities as well as privileges.
- 2 If it is argued that such detailed disclosure as is currently required in Great Britain, for example of turnover figures, may expose some companies to more intense competition in their weakest activities—and there are at least two companies in this sample which share this view—it must be said that it is exactly this kind of competition that is needed in the country is to get an efficient allocation of resources.
- 3 There are too close ties between Northern Ireland public companies and those in Great Britain for the rigour of greater disclosure not to apply throughout the whole of the United Kingdom.

The case for and against ratio analysis has been argued in full. Its benefit to the outside analyst—assuming disclosure is in line with the recent British Companies Act—is not in question. Its benefit to the insider, the management of a company, should not in this analyst's view be totally discounted. Both "outsiders" and "insiders" can profit from Sources and Uses of funds analysis and there is much to be said for the latter providing the former with this analysis as part of their published financial accounts.

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