

A survey of investment appraisal methods used by financial analysts in South Africa

1. Introduction

Investment analysts play an important part in investment markets around the world. From the part they play in many investment decisions, it might be expected that there would be a vast body of research that covered both the use of the various appraisal methods and the sources of information used by investment analysts. However, this does not appear to be the case. Indeed, little information regarding investment approaches by analysts exists worldwide.

In an attempt to correct this situation, John Arnold and Peter Moizer conducted a survey in the United Kingdom (UK) (Arnold & Moizer, 1984). In collaboration with Eric Noreen, the UK survey was duplicated in the United States of America (USA) (Arnold, Moizer & Noreen, 1984). From the two surveys it was apparent that there were significant differences between the US and the UK analysts in both the approach to analysis and the choice and use of various sources of information.

A study of the literature revealed that no comparable survey had been conducted in South Africa (SA). This study therefore extends the work of Arnold, Moizer and Noreen by examining the investment analysis approach adopted in South Africa. In addition, the approach adopted by SA investment analysts is compared with that adopted by UK and USA analysts wherever possible.

2. The survey and sample selection

As mentioned above, this study is based on the pioneering work of Arnold, Moizer and Noreen (1984). Realising the importance of investment analysts in the capital markets, they endeavoured to provide a broad description of the procedures used by analysts in appraising shares. In addition, because of the importance of information in investment appraisal, Arnold et al included in their research a study of the sources and use of information. Finally, by conducting the survey in both the UK and the USA it was possible to identify some differences in the approach adopted by UK vis-a-vis USA analysts. Also, the use of different sources of information in the two countries could be compared.

As this study is a repeat of two other studies, it was considered essential that the three studies match each other as closely as possible. Accordingly, the questionnaire used was similar to that used by Arnold, Moizer and Noreen, reducing interpretation bias that would have resulted from creating new questions in each study. The only difference between the questionnaires was the phrasing of the questions to represent more accurately the common use of certain terms in South Africa. It should be noted that by combining both questionnaires, there were more questions in this study than in those of Arnold, Moizer and Noreen. Furthermore, some questions were added to gather information of particular interest to the researcher.

The questionnaire was then pilot-tested. This resulted in the inclusion of some additional questions and the re-phrasing of some terms unfamiliar to South African analysts; otherwise the questionnaire was similar in all respects to those used by Arnold, Moizer and Noreen.

As in the earlier studies of Arnold et al, the questionnaire was mailed to a sample of investment analysts. The respondent was not required to reveal any confidential information and those questions that could, in any way, be of a confidential nature were clearly marked as optional. Respondents were also not required to identify themselves or the company they worked for.

The sample frame comprised:

- (i) The membership list of the Investment Analysts Society of South Africa;
- (ii) Individual analysts in companies and firms of stock-brokers. (To ensure that these individuals had not already received a questionnaire received from the Investment Analysts Society mailing list, a covering letter was attached asking them to discard the questionnaire if they were members of the society.);
- (iii) Analysts who attended an investment analysis course at the Graduate School of Business, University of Cape Town.

By using more than one source, it was hoped to increase the spread of analysts reached in the target population.

The mailing of reminder notices was only possible to those individuals personally approached. The inability to be able to post reminder letters to members of the Investment Analysts Society was a major limitation to improving the response rate. This fact also limited the ability of the researcher to be able to make any comments on the non-response bias of the survey.

In total, 491 questionnaires were distributed and 127 responses were received. Of these, 31 were not usable as the respondents indicated that they were not involved in the analysis of companies quoted on the JSE on a regular basis. The remaining 96 (20% of the total) were considered to be a large enough sample to reflect the target population with a reasonable degree of accuracy.

3. Results

The survey revealed a number of characteristic differences in the profile of SA analysts vis-a-vis the UK and USA analysts. For example, the "average" SA analyst works for a company which employs 5 to 6 analysts (UK and USA 10), has a portfolio of 32 listed companies (UK and USA 40) and spends 48% of the week doing analysis (UK and USA 60%). An additional 13 companies, outside of their regular portfolios, are reviewed annually (UK and USA 26). In addition, SA analysts have on average less experience than analysts in both the UK and USA (SA 8.5 years, UK 12.5 years, USA 16 years). Finally, SA analysts are more likely to specialise in a particular market sector (SA 66%, UK and USA 50%).

The results of the survey are presented below in six major subsections, each of which deals with a specific aspect of the survey.

3.1 Appraisal methods used

The results presented in Table 1 indicate that fundamental analysis appears to have universal popularity, although it is "always used" more often in the USA than

either SA or the UK. Technical analysis is used on average "sometimes" and modern portfolio theory (MPT) "hardly ever" in all three countries.

Arnold, Moizer and Noreen take a cynical view by way of a possible explanation of this overwhelming use of fundamental analysis, saying:

"A possible explanation for the dominance of fundamental analysis is that this approach most closely fulfils one of the job specifications of the analyst to identify those stocks which appear to be under- or over-valued by the market. In addition, fundamental analysis, more than technical analysis or beta analysis (MPT), provides analysts who report to third parties with an opportunity to show how much data they have collected and how much analysis they have done."

(Arnold, et al, 1984:14)

Although this may be a valid observation, it does not explain the preponderant use of fundamental analysis, given that other methods are available. After all, an analyst is evaluated on performance over time and not on the individual recommendation made.

In the preface to their "Charting Handbook" Geoghehan, Goldwasser and Lomberg state that charting or technical analysis does not have the same acceptance in SA as in the USA (Geoghehan, Goldwasser and Lomberg, 1982). The evidence from these surveys clearly refutes this observation. However, charting takes diverse forms and there could be a greater level of sophistication in the techniques employed in the USA than in SA which may explain why the authors, in the preface to their report, suggest "that much of the literature relating to charts feels foreign to the South African reader who accordingly queries its validity in the local market".

Table 1: Frequency of use of techniques of analysis

	Mean %	Almost always 96-100% %	Usually 66-100% %	Some-times 36-65% %	Hardly ever 6-35% %	Seldom 0-5% %
Technical analysis						
(SA)	55,4	29,2	19,8	20,8	19,8	10,4
(UK/USA)	41,5	12,5	13,9	25,1	23,4	25,1
Fundamental analysis						
(SA)	92,2	72,9	25,1	1,0	0,0	1,0
(USA)	93,5	86,2	9,8	2,0	0,0	2,0
(UK)	92,2	76,1	19,9	2,5	1,5	0,0
Modern portfolio theory						
(SA)	26,5	5,2	8,3	19,8	16,7	50,0
(USA)	33,6	4,9	15,7	22,6	18,6	38,2
(UK)	21,1	2,0	4,5	18,4	24,4	50,7

Note

Means are based on interval midpoints.

(Arnold et al only presented combined results for cases in which the difference was not statistically significant.)

Usage of MPT in SA and the UK is significantly below that of the USA as is the use of fundamental analysis. Indeed, the results from all three surveys suggest that despite MPT having attracted considerable academic attention, it does not appear to have nearly as much support among analysts who depend on their appraisals for a living. Further research is necessary before the

reasons can be established why the technique does not enjoy much support outside the teaching institutions.

The perceptions of the potential usefulness of each technique, indicates that there is little difference between actual usage and the perceived usefulness of technical analysis and fundamental analysis, as is shown in Table 2.

Table 2: Perceived usefulness of each appraisal technique

	Mean	Extremely useful	Very useful	Moderately useful	Of little use	Of no use
Technical analysis						
(SA)	2,8	11,5	19,8	50,0	13,5	5,2
(UK/USA)	2,9	7,7	11,0	52,0	22,0	7,3
Fundamental analysis						
(SA)	1,6	52,1	40,6	5,2	1,0	1,0
(USA)	1,3	75,5	19,6	4,9	0,0	0,0
(UK)	1,5	58,0	32,0	9,0	1,0	0,0
Modern portfolio theory						
(SA)	3,5	2,1	14,6	34,4	33,3	15,6
(UK/USA)	2,4	1,0	5,0	41,6	28,7	13,7

Note

Means are based on a five point scale.

(Extremely useful = 1, Of no use = 5.)

(Results with no significant difference were combined in the US/UK study.)

Table 3: Frequency of use of valuation bases

	Mean %	Usually 66-100% %	Sometimes 36-65% %	Seldom 0-35% %
Historical cost (SA)	59,5	53,1	21,9	25,0
(UK/USA)	72,2	74,3	18,4	7,3
Replacement cost (SA)	48,3	28,1	37,5	34,4
(USA)	43,5	15,2	48,9	35,9
(UK)	54,1	39,9	31,9	28,2
Liquidation value (SA)	38,6	21,9	19,8	58,3
(UK/USA)	49,8	29,4	39,7	30,9
Inflation-adjusted historical cost (SA)	45,6	27,1	31,3	41,6
(UK/USA)	33,6	11,3	25,9	62,8

Note

Averages are based on interval midpoints.
(Results with no significant difference were combined in the US/UK study.)

Table 4: Fundamental appraisal factors

	Mean %	Almost always 96-100% %	Usually 66-100% %	Some- times 36-65% %	Hardly ever 6-35% %	Seldom 0-5% %
Net asset value (SA)	64,9	38,5	32,3	18,8	5,2	5,2
(UK/USA)	71,0	32,0	30,0	26,3	10,4	1,3
Financial ratios (SA)	76,4	52,1	21,9	13,5	3,1	9,4
(UK)	71,4	35,2	30,2	22,1	6,0	6,5
(USA)	82,5	53,5	27,3	15,2	2,0	2,0
An estimate of the P/E ratio (SA)	65,7	36,5	20,8	22,9	6,3	12,5
(UK/USA)	80,1	48,5	31,9	11,5	4,7	3,4
An estimate market value, applying an estimated P/E ratio to an earnings forecast (SA)	64,0	38,5	19,8	17,7	7,3	16,7
(UK/USA)	74,1	45,3	27,4	11,1	9,1	7,1
An estimate of future dividend yield (SA)	85,1	64,6	20,7	9,4	1,1	4,2
(UK)	77,4	44,2	29,9	17,3	6,1	2,5
(USA)	60,3	30,3	18,2	25,3	14,1	12,1
An estimate of value using discounted future cash flows (SA)	66,5	42,7	16,7	16,7	12,5	11,4
(UK)	31,2	8,2	7,7	21,5	25,1	37,5
(USA)	53,9	25,3	18,2	22,2	13,1	21,2

Note

Means are based on interval midpoints.
In certain cases the results for the UK and USA had to be combined as this was the manner in which they were published by Arnold et al (1984).

It is interesting to note that in South Africa, technical analysis is perceived as being more useful. This is consistent with the greater use of the method. Also, although the use of MPT in South Africa falls below that of the USA there is a significantly greater perception of

the usefulness of the technique, with 16,7% of the respondents rating MPT as "very useful" or "extremely useful" as opposed to 6% in the UK and USA.

An explanation of the different use and perceptions of the three methods may possibly be that each method

may be regarded as serving a different purpose. For example, fundamental analysis would determine which share to purchase. Once the choice of share has been made, technical analysis may be employed to determine the best time to make that purchase. Analysis using modern portfolio theory is, by its very nature, a portfolio optimising technique and its use could be attributed to that function.

3.2 Approach to fundamental analysis

Analysis of the results presented in Table 3 indicates that historical cost is still the most widely used of the valuation bases in all countries surveyed with 53,1% of SA analysts and 74,3% of UK and USA analysts "usually" using the historical cost method. Replacement cost is the second most favoured technique in SA and the UK, "usually" used by 34% of analysts (USA 15,2%). SA analysts "usually" use inflation-adjusted historical costs significantly more often than their foreign counterparts (SA 27,1%, UK/USA 11,3%).

This is probably a reflection of the relative levels of inflation in the various countries at the time of the surveys. More USA and UK analysts "usually" use the liquidation value (SA 21,9%, UK/USA 29,4%) which appears to be the least popular value base in SA. Inflation-adjusted costs are least popular in the UK and USA with only 11,3% of analysts making it a "usual" practice to calculate these values as opposed to 27,1% of SA analysts.

As regards the fundamental appraisal factors, Table 4 indicates that dividend yield is regarded as the most important factor (85,1%) by analysts in SA. When the individual results are ranked in order of importance, it is interesting to note that dividends are relatively less important in the UK and USA with both relatively less and the price earnings ratios ranking higher than dividends. The importance attached to dividend estimates in South Africa could indicate that SA investors have a higher preference for dividends than similar investors in the other countries. Why this should be is, of course, a matter for future research.

Other factors which emerge from Table 4 are that South African analysts make significant use of discounted cash flows (NPV). This method has the third highest average rating and is marginally more popular than the net asset value and price earnings estimates. Indeed, 59,4% of SA analysts estimated NPV "usually" or "almost always" compared to 43,5% of USA analysts and 15,9% of UK analysts (where NPV ranked lowest).

The discounted cash flow method is that most recommended in textbooks concerned with price determination. The low response for using discounted cash flows, particularly in the UK, suggests that there is general resistance to the use of this approach. A possible explanation is provided by a respondent to the Arnold and Moizer's study in the UK:

"Discounted cash flows, although mathematically very appealing, is far too precise an estimate of a company's worth, given the inexact nature of investment. More important is the overall view of a share including all factors; earnings, quality of management and products, future outlook and net asset value; information which is gradually gained with experience and somehow distilled, haphazardly if you like, into some kind of price earnings ratio, the value (of which) is dependent on one's view about the likely growth of earnings per share."
(Arnold & Moizer 1984: 201)

3.3 Forecasting

Table 5 below indicates the frequency with which analysts forecast several key variables in the valuation process. As can be seen, earnings per share is the most frequently forecast variable in all three countries. However, there is a significant difference as regards dividends which are the second most frequently forecast variable in the SA survey, fourth in the UK survey and ninth in the USA survey. This substantiates the results of the previous section indicating the greater importance attached to dividends by SA analysts.

Table 5: Forecast frequency

	SA		UK		USA	
	Mean %	Rank	Mean %	Rank	Mean %	Rank
Earnings per share	91,3	1	87,9	1	88,9	1
Dividends	90,0	2	81,6	4	72,7	9
Pre-tax profit	77,2	3	86,2	2	78,5	4
Profit before interest expense	72,1	4	69,4	7	73,9	7
Turnover	71,1	5	81,5	5	62,5	10
Cash flows	69,4	6	62,7	8	77,2	5
Post-tax profit	66,5	7	84,2	3	74,4	6
Price earnings ratio	55,9	8	78,5	6	79,7	3
Return on capital	54,1	9	51,9	10	73,1	8
Share market value	49,8	10	62,1	9	82,2	2
Ratio of turnover to capital employed	31,5	11	32,7	11	54,2	11

Note

Means are based on interval midpoints.

("Almost always 96-100%", "Usually 66-95%", "Sometimes 36-65%", "Seldom 6-35%", "Hardly ever 0-5%".)

Apart from earnings per share and dividends which are forecast on average more often in SA, analysts in the USA forecast more factors more often than either the SA or UK analysts.

3.4 Source and use of information

Each survey asked the respondent to indicate the perceived usefulness of fifteen sources of information. A summary of the results of each survey is presented in Table 6 below.

Table 6: Source and usefulness of information

	SA		UK		USA	
	Mean	Rank	Mean	Rank	Mean	Rank
Balance sheet	4,5	1	4,3	1	4,5	2
Profit and loss account	4,5	1	4,3	1	4,6	1
Quarterly, half-yearly results	4,3	3	4,1	3	3,9	4
Chairman's statement	4,0	4	3,7	6	3,0	13
Source and application of funds statement	4,0	4	3,8	5	4,2	3
Discussions with company personnel	3,8	6	3,9	4	3,9	4
Qualified auditor's report	3,8	6	3,5	7	3,9	4
Directors' report	3,5	8	3,4	8	3,2	8
Current cost information	3,4	9	3,1	10	3,0	11
Statistical and information services	3,3	10	3,1	10	3,2	8
Financial press	3,1	11	3,2	9	3,1	10
Government/industry statistics	3,0	12	2,8	12	2,6	15
Unqualified auditor's report	2,8	13	2,1	15	2,9	14
Trade journals	2,7	14	2,7	14	3,3	7
Other analysts	2,6	15	2,8	12	3,0	11

Note

Mean calculated from a five point scale. (1 = no influence to 5 = vital influence.)

In a number of surveys conducted in the USA, considerable evidence has been presented which suggests that analysts, rather than individual investors, are the most significant users of annual reports (Epstein, 1975) (Baker and Haslem, 1973). This finding was not supported by two further surveys (Chang and Most, 1981) (Lee and Tweedie, 1975), which concluded that investors place considerable emphasis on annual reports. In addition, Belkaoui, Kahl and Peyrard (1977), in an international comparison of the information needs of financial analysts, conclude that annual report data are a significant source of information. Therefore, regardless of whether it is investors or analysts who are the major users of company reports, it is fair to conclude that company reports are a major and important source of information for financial analysts.

The mean result for the balance sheet and profit and loss account indicates that these two items are perceived to be of vital influence in all three countries. Interim results are more influential in SA than in the USA and UK. Listed below are those items of information considered as of "vital" or "major" influence by the majority of analysts in all three countries:

- balance sheet (SA 89%, UK 87%, USA 92%)
- profit and loss account (SA 87%, UK 88%, USA 95%)
- quarterly, half-yearly results (SA 80%, UK 79%, USA 70%)
- discussions with company management (SA 69%, UK 67%, USA 69%)
- a qualified auditor's report (SA 69%, UK 55%, USA 69%)
- source and application of funds statement (SA 66%, UK 66%, USA 81%)

Four of the above items are included in annual reports. This suggests that these reports are the single most important source of information, with American analysts placing more influence on these reports than SA and UK analysts. Accepting that the content of these reports attracts considerable attention, the different emphasis placed on each item is of interest.

Significant from the results is the considerable difference in the ranking of the chairman's/president's report by analysts in the USA compared to analysts in both SA and the UK. Ranked 13th of the fifteen items, the chairman's/president's report is considered of only "some influence" in the USA. SA analysts regard this statement to be of "major" influence.

Trade journals appear to have more influence in the USA than in both SA and the UK. As trade journals do not have the investment market as their primary audience, it is to be expected that they are not a major influence. The content of trade journals also varies considerably from country to country.

Auditors' reports, both qualified and unqualified, attract least attention in the UK. Predictably, little influence is attached to unqualified audit reports in all countries, but when qualified the increase in influence is significant.

Finally, it is interesting to note the importance attached by analysts to direct contact with company management. This is a significant result of all three surveys, with all analysts attaching approximately the same influence to these contacts.

3.5 Discussions with management

In preparation for their survey, Arnold and Moizer discovered that many analysts were making significant use of direct contacts with company personnel to gather information and to discuss performance, both past and future. Included in the survey were questions to evaluate how widespread these contacts were and the substance of the subjects discussed. From the results, it is apparent that this practice is widespread in SA as well, although SA analysts do not make as frequent use of this source. In SA, 43% of analysts make at least two contacts a year with management as opposed to more than 50% of UK and USA analysts. Similarly, 15% of local analysts make three calls or more a year (UK/USA 30%).

The results in Table 7 indicate that SA company personnel are more reluctant to provide details of company practice and performance than personnel in both the UK and the USA. Indeed, the quality of the feedback to analysts in these direct contacts is possibly the reason why many more UK and USA analysts make more frequent use of the method.

Table 7: Frequency of management-provided information

	Mean %	Almost always 96-100% %	Usually 66-100% %	Some- times 36-65% %	Hardly ever 6-35% %	Seldom 0-5% %
Management long-term objectives and plans						
(SA)	67,9	30,2	34,4	19,8	1,0	14,6
(UK/USA)	78,7	33,1	45,8	17,7	2,3	1,1
Reasons for any balance sheet changes						
(SA)	60,5	30,2	34,4	12,5	7,3	15,6
(UK/USA)	77,7	35,9	40,9	17,4	3,9	1,9
Management comments on analysts' own forecasts						
(SA)	57,1	17,7	30,2	28,1	6,3	17,7
(UK)	49,2	7,0	22,8	41,5	12,9	15,8
(USA)	64,7	27,1	25,9	30,6	8,2	8,2
Changes in key personnel						
(SA)	55,7	17,7	30,2	21,9	12,5	17,7
(UK/USA)	63,1	16,7	36,0	29,8	12,8	4,7
Details of changes in the product range						
(SA)	52,4	14,6	27,1	27,1	9,8	21,9
(UK/USA)	67,9	23,0	35,2	31,6	4,7	5,5
Details of research and development projects						
(SA)	45,7	15,6	18,8	30,2	15,6	19,8
(UK/USA)	56,9	10,2	29,1	40,2	14,6	5,9

Note

Means are based on interval midpoints.

In five of the six items of information examined, SA company personnel part less often with the relevant information. Only in so far as comments on the analysts' own forecasts do UK analysts receive less response than in SA. It is also interesting to note that only one item, management's long-term plans, is "usually" provided to the majority of analysts in all countries. Also, only in the UK do management not "usually" provide analysts with comments on the analysts' own forecasts. In addition to the above, a higher percentage of analysts in the UK and USA indicate "usually" receiving information concerning changes to the product range and changes in key

personnel (68% and 63% respectively) than do South African analysts (52% and 56% respectively).

3.6 Criticism of annual reports

Finally, the last section of the survey concerned criticisms of the annual report data put out by companies. Overall, the results (Table 8) indicate more dissatisfaction on the part of SA analysts than that expressed by UK and US agents.

In particular, SA analysts expressed a desire for more information in the annual reports of banks and insurance companies. Details on commitments was another item that analysts felt lacked in adequate reporting.

Table 8: Criticisms of company accounts

		Disagree %	Neutral %	Agree %
The need for management to include forecasts of sales and profits	(SA)	5,2	12,5	82,3
	(UK/USA)	49,3	27,2	33,5
Insufficient indication of the off-shore commitments	(SA)	5,2	9,4	85,4
	(UK/USA)	5,2	39,8	55,0
The need for detailed statements of the company's cash flows	(SA)	7,3	20,8	71,9
	(UK)	13,8	34,2	52,0
	(USA)	3,1	37,5	59,4
There is insufficient data on each of the company's business activities	(SA)	3,1	18,8	78,1
	(USA)	16,6	25,0	58,4
	(UK)	6,2	21,0	72,8
Insufficient information on expenditure on research and development*	(SA)	11,5	41,6	46,9
The transactions of the company with its pension scheme are inadequately disclosed*	(SA)	11,5	49,0	39,2
"Off balance sheet finance" is not disclosed adequately*	(SA)	6,2	12,5	81,3
Banks and insurance companies provide insufficient information*	(SA)	2,1	15,6	82,3
Geographical analysis is inadequate*	(SA)	5,2	37,5	57,3

*Denotes questions not asked in the UK and USA questionnaires. (Results not significantly different have been combined.)

It is interesting to note that there is considerable disparity in the requirements of analysts with respect to forecasts of sales and profits. Relatively few analysts in the UK and USA agree that a need exists for management to provide such forecasts. On the other hand, 82% of SA analysts deem this desirable. This may reflect different views on the role of analysts in the different countries. A respondent to Arnold and Moizer's survey replied that:

"The trouble with this question is that if all the above information was disclosed by companies, inefficient inexperienced analysts would be put on the same basis as analysts who are prepared to take the trouble to ask this sort of question."

(Arnold and Moizer 1984: 204)

In contrast, a SA analyst takes the following viewpoint in this survey:

"A company, by not making a full disclosure of details of this nature, is doing itself a disservice. We analysts are not crystal ball gazers and are forced to err on the conservative side. The result, an erratic valuation, particularly in the present time of uncertainty."

It is interesting to note the feelings of the UK and USA analysts as regards the need for cash flow statements when compared to South African analysts. Reported earlier was the greater emphasis placed by SA analysts on discounted cash flows. The request for more information on a company's cash flows by South African analysts suggests that NPV might be even more enthusiastically regarded in SA were there to be more supportive reporting.

Finally, it must be emphasised that some of the differences in response could possibly be explained by the differences in the required levels of reporting and the health of the economy at the time of the surveys. This is particularly true as regards the SA response to off-shore commitments.

4. Conclusions

The objectives of this study were to:

- establish within broad boundaries the use of analysis techniques in South Africa;
- determine the use and influence of a number of specific methodologies that can be used in appraisal;
- evaluate the use and influence of various sources of information commonly available to investment analysts;
- to compare the practice of financial analysis in SA with that in the UK and the USA.

The study clearly indicated that there are numerous areas that need clarification before final conclusions can be drawn concerning the choice of technique, the sources of information and the differences between the three populations. For example, the whole question of academic qualifications was not addressed in these studies and there are indications in other studies that this may have a major influence on the individual's choice (Davies, 1982: 123 and Firth, 1978: 57). In addition, it must be stressed from the outset that numerous techniques and approaches to investment appraisal are available to the analyst. It was, therefore, to be expected that the community of analysts would reflect a wide application of various forms and methods of analysis in an attempt to establish the "best" method. That there is confusion among analysts as to the relevance of some techniques was highlighted by the following comment made by one SA analyst:

"I have been involved in one form of analysis or another for some considerable time now. Having read widely on the subject and applied a host of different techniques at various times in my career, I have come to the conclusion that 'throwing the bones' produces as consistent results as any."

It is interesting to note that the above respondent is still a regular user of all three techniques covered in the questionnaire.

In general, the results obtained from the survey indicate that South African analysts' approach to investment appraisal is not radically different from the approach adopted overseas. Although there are a number of differences, there is no evidence that South African analysts are less sophisticated than their overseas colleagues. To the contrary, in some aspects, there is a greater use and perception of usefulness of the more sophisticated "modern portfolio theory". Traditional analysis, using fundamental principles, remains the most used technique in all countries and it appears that other techniques are used to support or confirm fundamental indicators or are used in select conditions, rarely being used in isolation.

The greater use of technical analysis is clearly the most outstanding difference between analysts in SA and overseas. This survey did not attempt to establish the perceptions of analysts as regards the efficiency of the particular market, whether weak form, semi-strong or strong form efficient. This made it impossible to provide an understanding of this difference in SA. The popularity of technical methods of appraisal would suggest, however, that there could be a significant difference in the perception of market efficiency.

In their survey, Arnold et al (1984) suggested that a division could be made between the UK and USA analysts on the grounds that USA analysts, on the evidence of their surveys, undertook more formal analysis than UK analysts. From this survey it is clear that SA analysts are more formal in some areas than the USA (eg their greater use of discounted cash flows) but are not as formal in other areas (eg the greater use of technical methods). Simple divisions are, therefore, difficult to substantiate with any confidence. However, examination of the profile of SA analysts does suggest that analysis in SA might not be as comprehensive as that in the USA. This is borne out by the greater number of forecasts made and the increased frequency of those forecasts in the USA. This could be due to a number of factors, such as the greater use of computer models and aids in North America. It does appear, however, that there are also differences in the perceptions of the items forecast in each country.

As regards information usage, it is obvious that this is dependent on the quality and validity of the information. If the influence of information can be regarded as a barometer of its quality, it appears that the financial statements put out in the USA are of a higher standard in general than those in both SA and the UK. The criticism of annual reports would support this observation, namely that SA annual reports do not conform to the same standards as those in both the UK and the USA. The reason for this could be the statutory requirements in those countries which force companies to reveal more and better qualified information on their operations.

An important conclusion of all the surveys concerned the frequency of direct contact made by analysts with company employees. The results of all three surveys indicate that this practice is widespread and highly

regarded by analysts. In addition, it is shown that the fruits of these contacts are dependent on the view taken by company employees of the role analysts play in the investment market. The results of the SA survey reveal that SA managements are not as supportive of analysts as are their overseas counterparts. It should also be noted that the costs of this information are significantly greater than those of the normal methods of analysis and the influence of these contacts, as a result of the active effort taken by the analysts, could be of overriding influence in the decisions of the analyst. Further research into the scope and nature of these contacts, approaching both the analyst and company employees, would provide greater understanding of the status of these contacts.

In conclusion, it must be stressed that investment analysis is an extremely broad subject and it would be presumptuous to assume that a single study could cover the entire spectrum of techniques used by analysts. This study has concentrated on the broader areas of analysis in an attempt to establish broad trends. Fundamental analysis, technical analysis and the techniques that are based on modern portfolio theory are generic terms that cover the spectrum of techniques currently being employed. In repeating the Arnold, Moizer and Noreen study, this study was restricted by the need to gather data that were comparable.

From this study it can be appreciated that there are significant differences between the practice of share appraisal. A partial explanation of this concerns the different reporting standards, different market conditions and a number of environmental factors, that differentiate the three countries. An additional factor mentioned by Arnold, Moizer and Noreen relates to the job specifications of analysts. To quote them:

"If the job specifications of US analysts differ from those of UK (SA) analysts, for example because there are relatively more or less portfolio managers amongst US analysts than amongst their UK (SA) counterparts, the responses of the two groups to questions concerning appraisal methods and use of information are likely to be significantly different." (Arnold et al, 1984: 19)

Thus, the overall conclusion from this study is that significant differences do exist in the practice of investment analysis in South Africa in comparison to both the United Kingdom and the United States of America. This does not lead to a conclusion that SA analysts are less sophisticated but rather that the local conditions and environmental factors, coupled perhaps with different educational backgrounds (a factor not considered in any of the studies), have encouraged analysts to adapt the various techniques to suit their purposes.

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