

CHAPTER FIVE

RESEARCH METHODOLOGY

“Observations require explanation but equally explanations need to be tested against the facts. It is not enough simply to collect facts. Nor is it sufficient simply to develop explanations without testing them against facts.”

de Vaus, D.A., (1992) “Surveys in Social Research”, Third Edition, Allen & Unwin, Australia, p.11.

5.1 Introduction

The purpose of this chapter is to detail the methods used to collect and compile the data that will form the basis for analysis. Section 5.2 outlines the population of interest, the sample selection process and the response rate; Section 5.3 details the survey instrument, its distribution and collation; Section 5.4 outlines the reliability tests used for the survey instrument to determine shareholders' and financial analysts' opinions about the valuation of livestock; Section 5.5 outlines the descriptive statistics used, and Section 5.6 presents the conclusions.

5.2 The Sample

Of interest in this research study are the users of general purpose financial reports. As shown in Chapter 2, the users are grouped into:

- 1) resource providers, including shareholders;
- 2) parties performing a review or oversight function, including financial analysts; and
- 3) recipients of goods and services.

A recent survey of Australia's largest businesses found (Houghton and Tan (1995)) that members of the Group of 100 believe that financial analysts (42.24%) and shareholders (40.7%) are the principal users of their general purpose financial reports.

As this study focuses on the measurement/valuation of livestock (see Chapter 3), shareholders of companies owning that asset (group 1 above) and financial analysts (group 2 above) becomes the population of interest for this research study. In Chapter 2 it was argued that those in group 3 were users who are not primarily interested in the two major issues of this research, and they are therefore not included in the population of interest.

It was not within the scope of this study to survey either all shareholders of all companies owning livestock or all financial analysts. To do this would have been prohibitively expensive as well as impractical. de Vaus (1992 p.60) suggested that an alternative approach is “to collect information from only some people in the group in such a way that their responses and characteristics reflect those of the group from which they are drawn”. The starting point for the selection of a sample of shareholders was to discover public companies which were required to produce general purpose financial reports and owned livestock. Then a representative sample of their shareholders could be selected.

A number of different approaches were taken to determine which companies owned livestock. Firstly, the Australian Accounting Research Foundation discussion paper on Accounting for Self-Generating and Regenerating Assets (Discussion Paper No.23, Roberts et al (1995)) and the work of Frost (1993), who surveyed companies owning livestock, to determine livestock valuation methods currently in use, were reviewed to ascertain the names of companies owning livestock. In addition, the Australian Associated Stock Exchanges (AASE) listing of miscellaneous industrial companies involved in pastoral and/or agricultural pursuits (Industry Code 227) was obtained. The general purpose financial reports of the Top 150 companies listed on the Stock Exchange (AASE) were also reviewed to determine if any of these companies owned livestock. The result of this was a list of 28 companies (see **Appendix 1**). The private companies were deleted from the final list as they are not required to prepare general purpose financial reports. A number of the miscellaneous industrial companies did not own livestock assets and were therefore also deleted. Two of the companies (Stanbroke Pastoral Company Proprietary Limited and Australian Agricultural Company Limited) had been taken over and therefore their parent companies were included in the list (AMP Society and Elders). Three of the companies (The Beef Machine, Pioneer Sugar Mills and F.J.Walker Limited) were neither listed on the AASE, nor listed in Jobson’s listing of Australian Public Companies. This resulted in

a list of nine (9) public companies which owned livestock, as shown in **Table 5.1**.

Table 5.1 Public Companies Owning Livestock

Company	Total Assets \$m		Livestock \$m		%	
	1996	1995	1996	1995	1996	1995
Arrowfield Group Limited	34.98	36.7	22.29	23.58	63.72	64.25
AMP Society Limited	42807	38199	90	84	.21	.22
CSR Limited	7690	7173	0.5	0.7	.006	.009
Elders Limited	795	718	67.6	69.3	8.5	9.6
Goodman Fielder Limited	2704	3040	35.1	35.0	1.3	1.15
MIM Limited	3363	3541	2.6	8.3	.077	.23
Ridley Corporation Limited	315	294	4.9	2.2	1.55	.75
Rural Property Trust	92.8	92.3	8.8	6.32	9.48	6.85
Tandou Limited	62.19	57.1	.36	.355	.58	.62

Of these nine companies only Arrowfield, Elders and Rural Property Trust had more than 5% of their assets invested in livestock. For this reason it was resolved to undertake a survey of the top 60 shareholders of these three companies. These 60 shareholders represented holders of 99.53% of the total shares of Elders Australia Limited, 89.81% of Arrowfield Limited and 80% of the Rural Property Trust.

The shareholder listings for Arrowfield and Elders were acquired from the share registrars, whilst the Trust Secretary of the Rural Property Trust sent out the survey forms to the Trust's shareholders.

The financial analysts were selected from the Telstra 1996 Yellow Pages for both Melbourne and Sydney. All companies listed were initially contacted by telephone to ascertain the name of the chief analyst to whom the survey instrument would be sent. Individual analysts who were listed in the Yellow Pages were also sent a survey instrument, although they were not contacted by telephone prior to sending out the survey instrument. In addition, all of the Industrial Analysts at J B Were were included in the survey as their names were available from information sent out by J B Were to their clients. This resulted in 148 survey instruments being sent out to financial analysts. A number of these were returned where individuals listed in the Yellow Pages had left the address, firms had been taken over, or no analysts were employed. A number of other analysts returned the survey, responding that they had no expertise in this area.

A follow-up letter and survey form were sent out one month later to all analysts not known to have responded. This elicited a further five (5) responses.

5.2.1 The Size of the Sample

If statistical tests are to be conducted the sample size must be large enough to draw conclusions about the characteristics of the population it represents, and it must minimise the probability of forming incorrect conclusions. The central limit theorem states that if random samples are drawn from the population, the sampling distribution of the sample means will be approximately normally distributed, provided that the sample size is sufficiently large. Byrkit (1988 pp.288-9) suggests that 'sufficiently large' is generally accepted to be 30 for distributions that are mound-shaped, that is, they have a relatively symmetric distribution about the mean, tapering off in both directions (e.g. bell shaped or normal distributions) and closer to 50 for badly skewed distributions. As 288 survey instruments were sent out, and 36 completed and returned this number meets the requirements of the central limit theorem.

5.2.2 Limitations

One limitation of the sample of shareholders is that it is not a random sample. de Vaus (1992 p.61) suggests five (5) steps in selecting a simple random sample. They are:

- “1. Obtain a complete sampling frame.
2. Give each case a unique number starting at one.
3. Decide on the required sample size.
4. Select that many numbers from a table of random numbers.
5. Select the cases which correspond to the randomly chosen numbers.”

This was not the process used in this study. The survey of financial analysts was a survey of the population of companies and individuals listed in the Melbourne and Sydney Yellow Pages telephone directory, whilst the survey of shareholders was done in conjunction with the officers of the companies involved. The Company Secretary of the Arrowfield Group considered that given the history of the company, more meaningful data would be obtained by surveying the top 60 shareholders rather than 60 randomly selected shareholders. Having decided to select the top 60 shareholders from Arrowfield it was considered appropriate to use the same selection process for the other companies.

5.3 The Survey Instrument

A survey instrument was used to ascertain the perceptions of users about the valuation of livestock. A copy of the survey instrument is provided in **Appendix 2**.

The survey instrument was mailed to the financial analysts and shareholders of Arrowfield and Elders, along with a covering letter (**Appendix 3**) and a stamped return envelope in order to encourage completion. It was considered

that enclosing a stamped return envelope rather than using prepaid envelopes would maximise the response rate. Two telephone numbers, a fax number and an email address were also provided in order that participants had an immediate contact point should they have any query about the survey instrument. The survey instruments sent to the shareholders of the Rural Property Trust were sent out by the Trust Secretary, along with the same covering letter sent to the financial analysts and shareholders of Arrowfield and Elders, and the stamped return envelope. The survey instruments sent to the financial analysts and shareholders were colour coded (blue for financial analysts and white for shareholders) in order that their responses could be compared.

5.3.1 Design of the Survey Instrument

The survey instrument was designed in the following way.

Definitions: Definitions of the measurement bases as outlined in Section 1.7 were given in question 1.

The Questions: The survey instrument was separated into three parts. Questions 1 to 4 were general questions about use of the various measurement bases and major objectives in using general purpose financial reports. Questions 5 to 9 were questions specifically about livestock classification and valuation. Questions 10, 11 and 12 asked about measurement in general and with specific reference to livestock.

Respondent Profile: The final section was used to determine some general details about the respondents, and whether they had any accounting qualifications in order to ascertain whether the responses of respondents with accounting qualifications differed from those without accounting qualifications, and to ascertain whether age of the respondents influenced their responses.

As mentioned in Chapter Three a review of the literature did not locate any studies which dealt with users perceptions about the valuation of livestock, and therefore it was not possible to compare this survey with any other studies. From this point of view this survey is unique in nature, however the definitions, objectives and assessment criteria used in the questions reflect those occurring frequently in the literature, other surveys and in the Statements of Accounting Concepts.

5.4 Non-Response Bias

36 of the potential 288⁵ respondents returned a completed questionnaire. This amounts to a response rate of 12.5%. de Vaus (1992 p.73) identified two problems created by non-response, unacceptable reduction in the sample size and bias.

Every effort was made to reduce non-response. As outlined earlier, all financial analysts were contacted by telephone prior to sending out the survey, a stamped addressed envelope was included with the survey form to encourage completion, and follow-up letters were sent out. In addition, the initial sample was much larger than needed in order to reduce the impact of reduction in sample size. As pointed out in section 5.2, under the requirements of the central limit theorem there are sufficient responses to conduct statistical tests and make some inferences about the population. With a greater response rate further statistical tests would have been conducted to ascertain whether age, educational qualifications, or membership of an accounting association of the respondents influenced their responses.

⁵

(112+ 176)

Of the 148 survey forms sent out to financial analysts, 36 were returned with some valid reason for them not being completed, e.g. no expertise, left address. Therefore the number of potential respondents for the financial analysts was 112.

Of the 180 survey forms sent out to shareholders, three (3) of the Elders surveys were returned not completed as the shareholder was deceased, whilst one of the Rural Property Trust surveys was returned having been almost completely destroyed by Australia Post, with an apology from that organisation. As the original envelope was not returned it was not possible to send this survey form out again.

There is still the problem of bias, which arises when the answers provided by respondents are different from the answers that would have been provided by those who did not reply. de Vaus (1992 p.74) suggests three ways to obtain information to enable adjustment for bias:

- (a) use what observable information can be picked up about non-respondents;
- (b) use the sampling frame to gain information about the characteristics of the non-respondents: and
- (c) compare the characteristics of the population with those of the sample.

As the survey was confidential it was not possible to identify non-respondents and identify their characteristics. With regard to (c) above, the characteristics of the population of financial analysts and shareholders are not known. If it were possible to identify non-respondents, secondary data about this group would have been sought to ascertain if they form a particular group that are likely to have responded differently.

Looking at the respondent profile, the respondents were evenly spread throughout the age categories, however a large percentage (70.6% [88.9% of financial analysts and 50.1% of shareholders]) of the respondents had at least a degree. This differential was not surprising as it is considered likely that a large proportion of financial analysts would have a post-secondary qualification as a requirement of their job.

It is possible that non-respondents had lesser educational qualifications, however it is assumed that their responses would not have differed in any material way from those who did respond.

With regard to item non-response, that is failure by a respondent to answer one or more questions on a returned questionnaire, in the SPSS statistical package cases with item non-response are omitted in the analysis.

5.5 Descriptive Statistics

Descriptive statistics are those which summarise patterns in the responses of people in a sample. As this study seeks to ascertain user perceptions about the usefulness of various measurements for the valuation of livestock, no hypothesis was developed. Instead, a number of research questions and propositions were presented as outlined in Chapter 4. In an attempt to answer these research questions descriptive statistics were used, which consisted of identifying mean scores for questions 1, 2 and 3, based on a Likert Scale, and mean scores for questions 8 and 10 based on rankings by the respondents. In addition, a frequency analysis was undertaken, showing the percentage responses for each of the questions.

Due to the low number of responses it was not possible to perform any meaningful subgroup analysis.

5.6 Conclusion

This chapter has outlined the research methods used in this study. Section 5.1 provided an introduction; Section 5.2 outlined the population of interest, the sample selection process and the response rate; Section 5.3 detailed the survey instrument, its distribution and collation; Section 5.4 outlined the reliability tests used for the survey instrument to determine shareholders' and financial analysts' perceptions about the valuation of livestock; Section 5.5 outlined the descriptive statistics used, and Section 5.6 presented the conclusion.

Chapter 6 will present a detailed analysis of the results.

CHAPTER SIX

ANALYSIS AND INTERPRETATION OF THE RESULTS

“Research is not good simply because it is mathematical or statistical, or because it makes use of ingenious machines. Research is good if it is significant, if it is fruitful, if it consistent with established principles, or if it helps to overthrow erroneous principles.”

Henry Schultz. (1938) “Statistics in Economics”, Report of the Fourth Annual Research Conference on Economics and Statistics, Colorado Springs, The Cowles Commission, p.84.

“Statistics are no substitute for judgement.”

Henry Clay

6.1 Introduction

This chapter will present an analysis and an interpretation of the responses to the questionnaire completed by a sample of financial analysts and shareholders. The purpose of the survey was to ascertain users' views of their objectives in using general purpose financial reports, and their perceptions about the reporting of livestock in general purpose financial reports. Section 6.2 will discuss the results regarding the classification of livestock. Section 6.3 will analyse the responses regarding the use of the different valuation methods. Section 6.4 will consider the objectives of users in using general purpose financial reports, Section 6.5 will consider the qualitative characteristics which accounting information should possess in order to be useful for decision making, and will summarise the users' perceptions regarding the ability of the different valuation methods to satisfy these criteria in general, and Section 6.6 will consider the qualitative characteristics which accounting information should possess in order to be useful for decision making, with specific reference to livestock, and will summarise the users' perceptions regarding the ability of the different valuation methods to satisfy these criteria for the valuation of livestock. Section 6.7 will discuss the respondents' profile, whilst section 6.8 will provide a conclusion.

6.2 Classification of Livestock

Table 6.1 shows that 67.6% of the users surveyed (80% of the shareholders and 61.1% of the analysts) **were not aware** that livestock is excluded from the standard on inventory (AASB 1019) and 52.9% of the users surveyed (53% of shareholders and 50% of analysts) were not aware that livestock is excluded from the standard covering depreciation of non-current assets (AASB 1021). This result is consistent with the expected finding.

Table 6.1 Awareness of Exclusion from Accounting Standards

	Total %	Analysts %	Shareholders %
Excluded from Inventory standard	67.6	61.1	80.0
Excluded from depreciation standard	52.9	50.0	53.0

Of the users surveyed for this study **Table 6.2** indicates that 39.4% (56.7% of shareholders and 27.8% of analysts) consider that livestock should be classified as a current asset, similar to inventory, 39.4% (55.5% of analysts and 20% of shareholders) believe that livestock should be classified as either a current asset or a non-current asset, depending on its intended use, whilst 15.2% (16.7% of analysts and 10% of shareholders) consider that livestock should have a separate classification. **This result was not expected and gives no support to the argument for a separate classification found in the literature. It is interesting to note that there is a significant difference between the responses of the two groups.**

Table 6.2 Classification of Livestock

	Total %	Analysts %	Shareholders %
Current Asset	39.4	27.8	53.3
Non-Current Asset	3.0	-	6.7
Current/Non-Current	39.4	55.6	20.0
Separate	15.2	11.1	20.0
Other	3.0	5.5	-

A crosstabulation of these results for shareholders and analysts shows a small negative correlation (Spearman's rank correlation of -0.21865) implying that financial analysts and shareholders will not select the same classification.

6.3 Valuation

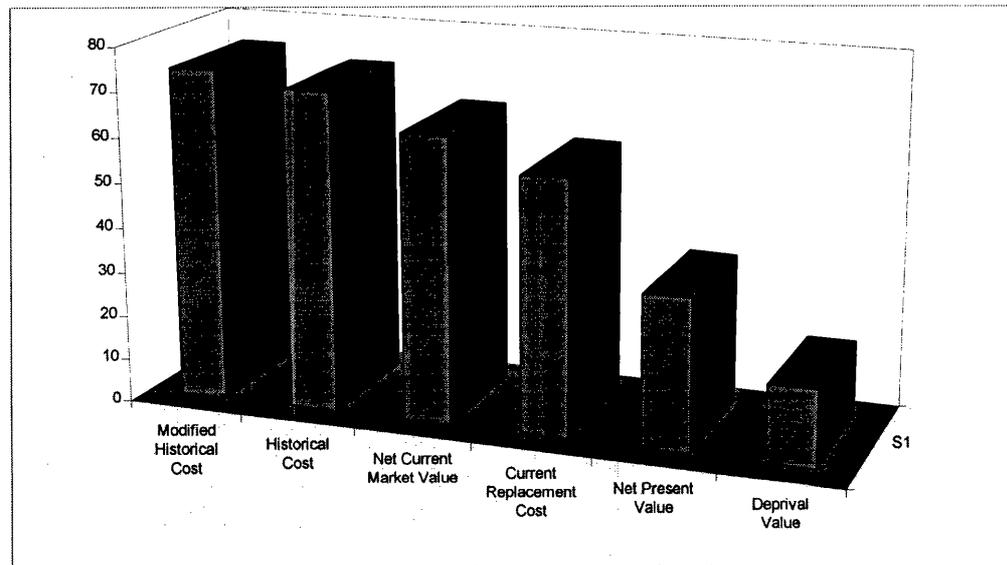
6.3.1 Use of the Different Measurement Bases

The first survey question asked respondents how highly they value the different measurement bases for assets. **Table 6.3 (Figure 6.1)** shows that 74.3% of respondents consider **modified historical cost** to be of value (34.3% of some value, 40% of great value) as a measurement base for assets, 71.4% believe **historical cost** to be of value (51.4% of some value, 20% of great value), 63.9% consider **net current market value** to be of value. 57.1% find **current replacement cost** to be useful, whilst only 34.2% find **net present value** to be of value and 17.1% find **deprival value** to be of some value. Interestingly, none (0) considered deprival value to be of great value, however 20% are undecided about deprival value and 42.9% do not use deprival value, most probably due to the fact that it is not widely used at the present time.

Table 6.3 Usefulness of the Measurement Bases

	Total %	Analysts %	Shareholders %
Modified Historical Cost	74.3	78.9	68.6
Historical Cost	71.4	78.9	62.6
Net Current Market Value	63.9	68.5	58.9
Current Replacement Cost	57.1	68.5	43.8
Net Present Value	34.2	42.2	25.0
Deprival Value	17.1	10.5	25.0

Figure 6.1 Use of the different measurement bases



These results were somewhat unexpected, as the high regard for historical cost (as opposed to modified historical cost as practised in Australia) was surprising. This may be related to the respondents' attitudes to modified historical cost. When compared to the later responses regarding the qualitative characteristics of accounting information, historical cost is regarded as the most reliable and the most understandable measurement base in general, and this may explain its support here.

The lack of support for deprival value was expected, mostly due to its complexity and the lack of widespread application and understanding of the method.

6.3.2 Perceived Usefulness of the Different Valuation Methods for the Valuation of Livestock

Users were asked to rank the measurement bases on the basis of their perceived usefulness for decision making with reference to the valuation of livestock in general purpose financial reports. The bases were ranked from 1-6. The resultant means shows users ranking to be as follows:

Most Useful	Net Current Market Value	2.258
	Modified Historical Cost	2.9
	Current Replacement Cost	2.93
	Net Present Value	3.594
	Historical Cost	3.83
Least Useful	Deprival Value	5.267

This result is consistent with the support found in the literature, with net current market value being put forward as the most useful valuation method for livestock, it being argued that historical cost is too hard to estimate for livestock and therefore inappropriate.

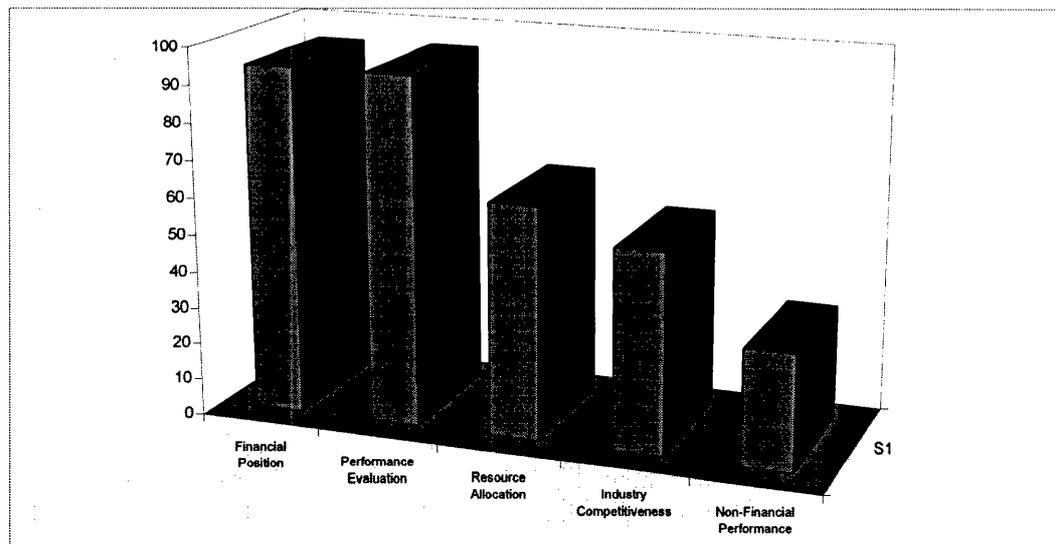
6.4 Importance of General Purpose Financial Reports in Achieving Users' Objectives

Table 6.4 (Figure 6.2) shows that 94.3% of respondents perceive general purpose financial reports to be important in achieving their major objectives of evaluation of financial position and performance evaluation, with 62.9% believing general purpose financial reports to be important in their resource allocation decision making, 54.3% considering such reports to be important in determining industry competitiveness, and 31.4% believing these reports to be important in assessing non-financial performance.

Table 6.4 Objectives of Users and Importance of General Purpose Financial Reports

	Total %	Analysts %	Shareholders %
Financial Position	94.3	94.7	93.8
Performance Evaluation	94.3	94.7	93.8
Resource Allocation	62.9	73.7	50.0
Industry Competitiveness	54.3	36.8	75.0
Non-Financial Performance Evaluation	31.4	26.3	37.5

Figure 6.2 Importance of general purpose financial reports in achieving users' objectives



A crosstabulation comparing the responses of the two groups (financial analysts and shareholders) shows that whilst both groups consider the reports to be important for achieving their objectives of evaluation of financial position and performance evaluation, financial analysts believe they are more important for resource allocation decisions than shareholders (73.7% of

analysts, 50% shareholders), whilst shareholders place far more importance on general purpose financial reports when assessing industry competitiveness than do financial analysts (75% shareholders, 36.8% analysts).

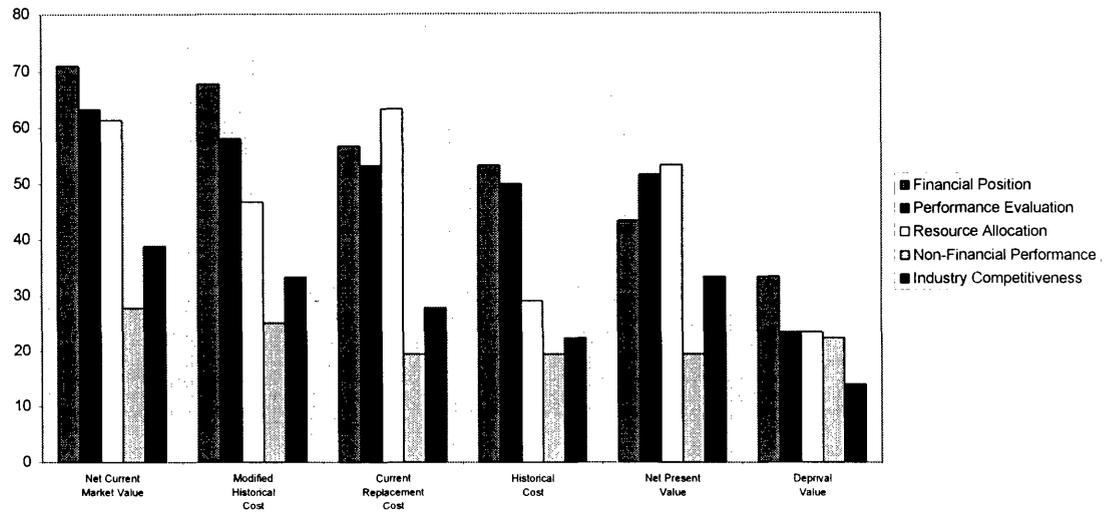
6.4.1 Measurement bases assistance in achieving users' objectives

Having established the importance users place on general purpose financial reports in achieving their objectives, **Survey Question 4** attempted to establish whether users perceived the measurement bases to be of assistance in achieving these objectives. **Table 6.5 (Figure 6.3)** shows that with regard to the evaluation of financial position 71% of respondents believe that **net current market value (NCMV)** is of assistance in achieving these objectives, 67.7% believe **modified historical cost (MHC)** to be of assistance, 56.7% consider that **current replacement cost (CRC)** can assist, 53.3% consider **historical cost (HC)** of assistance, 43.3% believe **net present value (NPV)** to be of assistance, and 33.3% think **deprival value (DV)** is of assistance in achieving their objectives.

Table 6.5 Assistance of Measurement Bases in Achieving Objectives

	NCMV %	MHC %	CRC %	HC %	NPV %	DV %
Financial Position	71.0	67.7	56.7	53.3	43.3	33.3
Performance Evaluation	63.3	58.1	53.3	50.0	51.6	23.3
Resource Allocation	61.3	46.7	63.3	29.0	53.3	23.3
Non-financial Performance	27.8	25.0	19.4	19.4	19.4	22.2
Industry Competitiveness	38.9	33.3	27.8	22.2	33.3	13.9

Figure 6.3 Assistance of measurement bases in achieving users' objectives



With regard to performance evaluation 63.3% of respondents believe **net current market value** is of assistance in achieving these objectives, 58.1% believe **modified historical cost** to be of assistance, 53.3% consider that **current replacement cost** can assist, 51.6% believe **net present value** to be of assistance, 50% consider **historical cost** of assistance, and 23.3% think **deprival value** is of assistance in achieving their objectives.

With respect to resource allocation 63.3% of respondents believe **current replacement cost** is of assistance in achieving these objectives, 61.3% believe **net current market value** to be of assistance, 53.3% consider that **net present value** can assist, 46.7% believe **modified historical cost** to be of assistance, 29% consider **historical cost** of assistance, and 23.3% think **deprival value** is of assistance in achieving their objectives.

It is significant that net current market value ranked most highly for both of the major objectives, i.e. evaluation of financial position and performance evaluation. Once again the low ranking for deprival value was expected.

6.5 Qualitative characteristics - which criteria are important in assessing the usefulness of accounting information in general purpose financial reports in general?

Users were asked to rank the criteria they regarded as important for decision making in general. The bases were ranked from 1-4. The resultant means shows users ranking to be as follows:

Most important	Reliability	2.029
	Comparability	2.353
	Relevance	2.441
Least important	Understandability	2.735

Given the importance placed on reliability and relevance in the Statements of Accounting Concepts (SAC 2) **it was not expected** that users would consider comparability more important than relevance in general.

6.5.1 User perceptions regarding the ability of the measurement bases to satisfy these criteria in general.

Table 6.6 (Figure 6.4) shows that 56.7% of respondents consider that **historical cost** is reliable in general, 43.3% believe that **net current market value** is reliable, 41.9% consider **modified historical cost** to be reliable, 40% feel that **current replacement cost** is reliable in general, 30% consider **net present value** to be reliable, whilst only 10% consider that **deprival value** is reliable in general.

Table 6.6 Ability of Measurement Bases to Satisfy the Criteria in General

	HC %	NCMV %	MHC %	CRC %	NPV %	DV %
Reliability	56.7	43.3	41.9	40.0	30.0	10.0
Relevance	26.7	53.3	46.7	54.8	50.0	16.7
Comparability	48.4	40.0	36.7	50.0	36.7	13.3
Understandability	70.0	63.3	56.7	63.3	33.3	12.9

Table 6.6 shows that 54.8% of respondents consider that **current replacement cost** is relevant in general, 53.3% believe that **net current market value** is relevant (with 30% undecided), 50% consider **net present value** to be relevant, 46.7% feel that **modified historical cost** is relevant in general, whilst only 26.7% consider **historical cost** to be relevant, and 16.7% consider that **deprival value** is relevant in general.

Figure 6.4 Ability of measurement bases to satisfy criteria in general

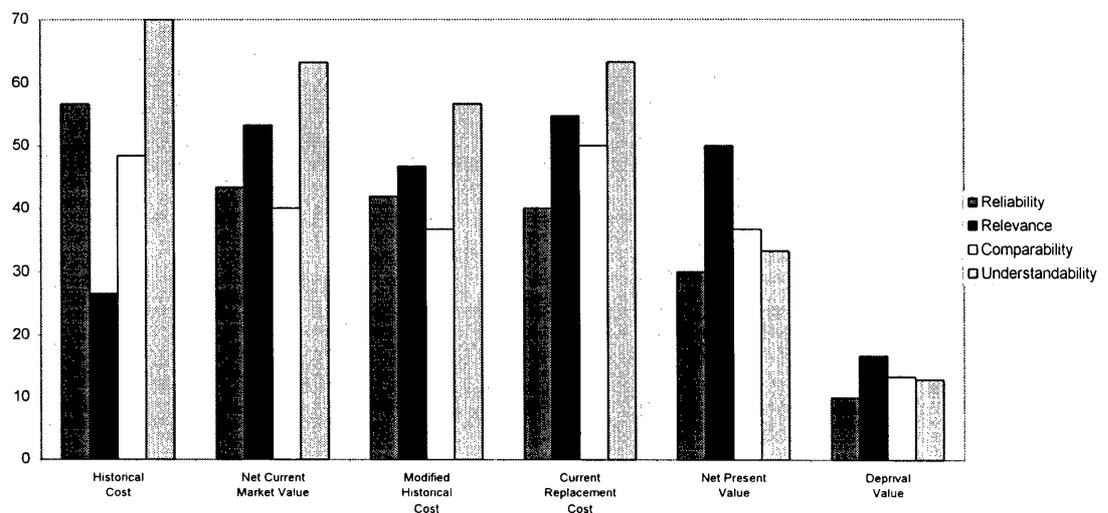


Table 6.6 shows that 50% of respondents consider that **current replacement cost** is comparable, 48.4% believe that **historical cost** is comparable, 40% consider **net current market value** to be comparable, 36.7% feel that **net present value** is comparable in general, whilst only 36.7% consider **modified historical cost** to be comparable, and 13.3% consider that **deprival value** is comparable in general (with some 40% undecided).

Table 6.6 shows that 70% of respondents consider that **historical cost** is understandable in general, 63.3% believe that **net current market value** is

understandable, 63.3% consider **current replacement cost** to be understandable, 56.7% feel that **modified historical cost** is understandable, 33.3% consider **net present value** to be understandable, whilst only 12.9% consider that **deprival value** is understandable.

6.6 Qualitative characteristics - which criteria are important in assessing the usefulness of accounting information in general purpose financial reports with specific reference to livestock?

Users were asked to rank the criteria they regarded as important for decision making with specific reference to livestock. The bases were ranked from 1-4. The resultant means shows users ranking to be as follows:

Most important	Reliability	2.029
	Relevance	2.235
	Comparability	2.618
Least important	Understandability	2.676

Given the response to the question about qualitative characteristics in general it is interesting to note that users perceive relevance as being more important when considering livestock valuation.

6.6.1 User perceptions regarding the ability of the measurement bases to satisfy these criteria with specific reference to livestock.

Table 6.7 (Figure 6.5) shows that 48.3% of respondents consider that **net current market value** is reliable for livestock, 46.7% believe that **historical cost** is reliable, 44.8% consider **modified historical cost** to be reliable, 41.4% feel that **current replacement cost** is reliable for livestock valuation, 20.7% consider **net present value** to be reliable, whilst only 6.9% consider that **deprival value** is reliable for the valuation of livestock.

Table 6.7 Ability of Measurement Bases to Satisfy the Criteria with Reference to Livestock

	NCMV %	CRC %	HC %	MHC %	NPV %	DV %
Reliability	48.3	41.4	46.7	44.8	20.7	6.9
Relevance	66.7	65.5	31.0	48.3	37.9	13.8
Comparability	62.1	62.1	44.8	41.4	33.3	3.4
Understandability	72.4	69.0	65.5	46.7	37.9	10.3

Table 6.7 shows that 66.7% of respondents consider that **net current market value** is relevant for the valuation of livestock, 65.5% believe that **current replacement cost** is relevant, 48.3% consider **modified historical cost** to be relevant, 37.9% feel that **net present value** is relevant for the valuation of livestock, 31% consider **historical cost** to be relevant, whilst only 13.8% consider that **deprival value** is relevant for the valuation of livestock.

Figure 6.5 Ability of measurement bases to satisfy criteria with specific reference to livestock

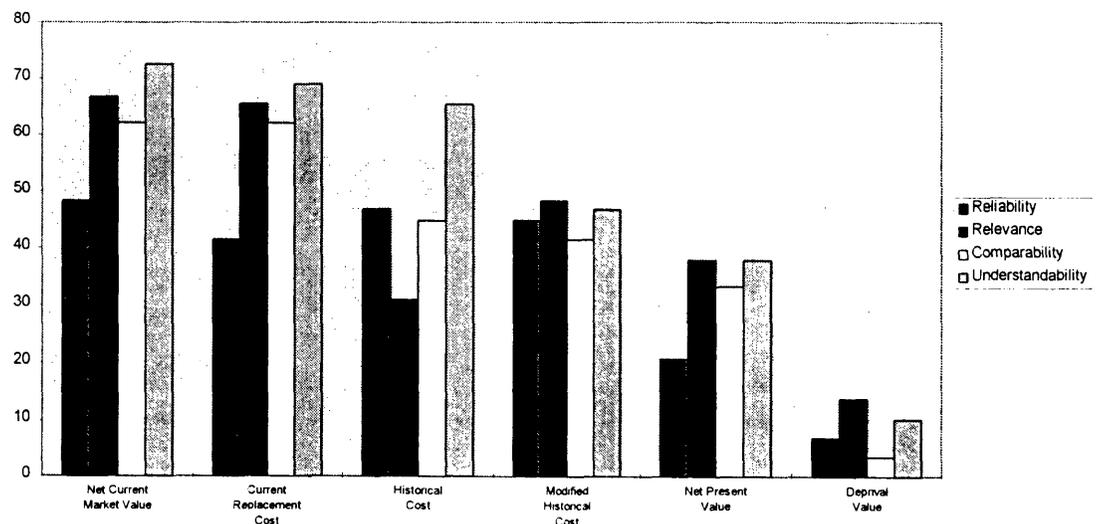


Table 6.7 shows that 62.1% of respondents consider that **net current market value** is comparable for the valuation of livestock, 62.1% believe that **current replacement cost** is comparable, 44.8% consider **historical cost** to be comparable, 41.4% feel that **modified historical cost** is comparable for the valuation of livestock, 33.3% consider **net present value** to be comparable, whilst only 3.4% consider that **deprival value** is comparable for the valuation of livestock.

Table 6.7 shows that 72.4% of respondents consider that **net current market value** is understandable for the valuation of livestock, 69% consider that **current replacement cost** is understandable, 65.5% believe that **historical cost** is understandable, 46.7% feel that **modified historical cost** is understandable, 37.9% consider **net present value** to be understandable, whilst only 10.3% consider that **deprival value** is understandable for the valuation of livestock.

These results were consistent with the expected findings, and with the support from the literature in favour of the use of net current market value for the valuation of livestock. Once again deprival value rated very poorly with users.

There is a significant difference between the respondents' perceptions of which measurement base satisfies the qualitative characteristics in general and for livestock.

6.7 Respondent Profile

It had been intended to perform a number of statistical tests to ascertain whether the age of the respondent, the academic qualifications of the respondent or their membership of a professional accounting association influenced their responses to the survey. Due to size of the response rate such tests were not able to be conducted, therefore the respondents' profile information is used for descriptive purposes only.

The respondents were fairly evenly spread among the age ranges with 29.4% being in the 21-35 age range, 29.4% being in the 36-50 age range, 23.5% being between 51 and 65, and 17.6% being over 65. The majority of respondents had some post-secondary qualifications (83.3%). This was particularly true among the financial analysts, with 88.9% having at least an undergraduate degree.

6.8 Conclusion

Chapter 6 provided a summary and analysis of the results of the survey of general purpose financial report users, conducted to elicit their perceptions about the various measurement bases, and their usefulness for the valuation of livestock in particular.

Section 6.2 discussed their responses to questions regarding the classification of livestock. Section 6.3 summarised users' responses regarding the valuation methods in general (6.3.1) and with specific reference to livestock (6.3.2). Section 6.4 reported on users' objectives in using general purpose financial reports, and how useful they perceive the measurement bases to be in achieving those objectives.

Sections 6.5 and 6.6 discussed the survey results with respect to the criteria required of accounting information, and which users perceive to be the most important in general and for livestock in particular. Given the importance of the criteria, sections 6.5.1 and 6.6.1 summarised users' perceptions regarding the ability of the measurement bases to satisfy these criteria. Section 6.7 summarised the profile of the respondents to the survey.

Having outlined the results of the survey, it is now important to discuss these and determine whether they answer the research questions proposed in Chapters 1 and 4. Chapter 7 will incorporate a discussion of the results and any implications of them.

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

“Because accounting is pragmatic and can be justified only in terms of its usefulness in the real world, the test of what is valid and appropriate in accounting must relate to real world phenomena and behaviour.”

Caplan, E.H.. in Sterling, R.R.(ed.), (1972) *Research Methodology in Accounting*. Scholars Book Co. Lawrence, p. 50.

“A shareholder selling upon the faith of an undervalued balance sheet has at least as much ground for complaint as a shareholder buying upon an overvalued balance sheet - especially when the departure from absolute truth is deliberate and intentional.”

Accountant, editorial. (1895). 26 January, p.76

7.1 Introduction

This chapter will begin with a summary of the study and the results of the statistical analyses. This will be followed by a discussion of the results as they relate to the literature on livestock valuation. Section 7.4 will present the conclusions which have arisen from this study, Section 7.5 will acknowledge the limitations of the study, followed by a discussion of the implications. The chapter will conclude by suggesting possible further research required in this area.

7.2 Summary of the Study

The purpose of this study was to identify the most appropriate method for the valuation of livestock in the statement of financial position in general purpose financial reports. 'Most appropriate' being determined by analysing the requirements of Statement of Accounting Concepts No.2 "Objective of General Purpose Financial Reporting" (SAC2) and Statement of Accounting Concepts No.3 "Qualitative Characteristics of Financial Statements" (SAC3), and by testing the results of the this analysis against users perceptions.

Chapter 2 analysed the financial reporting environment and general purpose financial reports, focusing on the statement of financial position and the valuation of assets on that statement, with specific reference to the valuation of the asset livestock. Chapter 3 attempted to evaluate the major alternative valuation models (measurement systems) proposed, in the context of measurement theory, and in the context of the underlying objectives of financial reporting as stated in the Statements of Accounting Concepts. It was suggested that accounting measurement should be subject to the same rules as other measurement systems. Without this requirement the resulting figures given as values from the accounting valuation models would not be logically rigorous, and would therefore be meaningless.

An examination of a number of valuation models was undertaken. The advantages and disadvantages of each model were discussed, and each model was assessed on the basis of its acceptability as a “measurement”, and its applicability to the valuation of livestock. An extensive survey of the literature was undertaken, with the results summarised in Chapter 3.

Chapter 4 outlined the research questions, propositions and expected findings. Chapter 5 detailed the methods used to collect the data for the analysis and outlined the population of interest, the sample selection process, the response rate, and the descriptive statistics used. Chapter 6 provided an analysis and interpretation of the results of the survey.

7.3 The Results of the Survey

As outlined in Section 4.3 no hypothesis was developed, but instead a number of research questions were put forward. Also a number of propositions were suggested.

The study sought to discover the views of users of general purpose financial reports about their objectives in using those reports, how they considered livestock should be classified, the qualitative characteristics they considered accounting information should possess to be of value to their decision making, and whether the various valuation methods available satisfy these criteria in general and with specific reference to livestock. Users were also asked which measurement base they considered to be the most useful for the valuation of livestock.

7.3.1 Classification

The three propositions regarding classification were:

P1.1.1 That users of general purpose financial reports are not aware that livestock is excluded from the accounting standard on inventory.

P1.1.2 That users of general purpose financial reports are not aware that livestock is excluded from the accounting standard on depreciation.

P1.2 That users of general purpose financial reports consider that livestock should be included in a separate classification for self-generating and regenerating assets.

With regard to the first two of these propositions, as expected it was found that users were not aware of the exclusion of livestock from the accounting standards on inventory (67.6%) and depreciation of non-current assets (52.9%). However, with regard to the third of these propositions (P1.2), this was found not to be the case. Only 15.2% of users considered that livestock should have a separate classification. The preferred classifications were as a current asset (similar to inventory) (39.4%) and as either a current or a non-current asset depending on the intended use of the asset (39.4%). Interestingly, shareholders preferred the current asset classification (56.7%), whilst financial analysts preferred a classification dependent on the asset's intended use (55.5%).

Therefore the first two propositions are accepted and Research Question 1.2 is answered in the negative. The third proposition, however, is clearly rejected, with the answer to Research Question 1.1 being that the preferred classifications are as a current asset (like inventory) or dependent on the asset's intended use. The reason for this is unclear, however it could be related to users not being comfortable with a change in reporting methods. The difference between the opinions of the two classes of users - shareholders and financial analysts - is not unexpected as they may have different objectives in using general purpose financial reports, as noted in Chapter 6 (section 6.4).

7.3.2 Valuation

A large number of propositions were put forward regarding the valuation of assets, however these can be grouped into categories as follows:

7.3.2.1 Decision making using general purpose financial reports

P2.1 That general purpose financial reports are important in assisting their decision making regarding:

- (a) allocation of resources, i.e. whether to invest or disinvest;
- (b) evaluation of company performance; and
- (c) evaluation of financial position.

It was found that users consider general purpose financial reports to be of great assistance to their decision making regarding the allocation of resources, evaluation of company performance and evaluation of financial position, but less important for consideration of non-financial performance or assessment of industry competitiveness. Thus the answer to Research Question 2.1 is that general purpose financial reports are very important in achieving users' major objectives.

Research Questions 2.2 and Propositions 2.2, 2.3, 2.4, 2.5, 2.6 and 2.7 related to the importance of the various measurement bases in assisting users' decision making and, as expected, it was found that modified historical cost, current replacement cost and net current market value were all considered important in assisting decision making regarding resource allocation, evaluation of company performance and evaluation of financial position, whilst historical cost was important for evaluation of company performance and financial position, but less important for resource allocation decisions. Net present value was considered important for resource allocation decisions and evaluation of company performance, but only moderately important for evaluation of financial position, whilst deprival value was perceived to be of little importance for resource allocation decisions, evaluation of company performance, evaluation of financial position. These results confirmed the propositions.

7.3.2.2 Usefulness of Measurement Bases for Livestock Valuation

Research Question 2.3 asked which measurement base users would consider to be the most useful for the valuation of livestock in general purpose financial reports. Proposition 2.8 suggested that they would perceive net current market value to be the most useful measurement base, whilst proposition 2.9 suggested that users would perceive deprival value (followed by net present value) to be the least useful measurement base for livestock in general purpose financial reports.

As discussed in section 6.3.2, as expected, users ranked net current market value as the most useful measurement base for livestock, with deprival value being ranked as the least useful, however historical cost was considered the next least useful, not net present value. This was not expected, although given the debate in the literature about the difficulties in estimating the historical cost of livestock (see Chapter 3) it should not be surprising that users recognise this.

7.3.2.3 Qualitative Characteristics of Accounting Information

Research Questions 2.4 and 2.5 asked which criteria users considered to be important in assessing the usefulness of accounting information in general and with respect to the reporting of livestock. Propositions 2.10 and 2.11 suggested that users would perceive reliability and relevance to be the most important criteria in assessing the usefulness of accounting measurements, in general and with specific reference to livestock.

Proposition 2.11 was found to be correct, in that users felt that reliability and relevance were the most important qualitative characteristics of accounting information for livestock reporting however, interestingly, when it came to financial reporting in general users considered that comparability was more important than relevance, ranking it second to reliability. Therefore proposition 2.10 was found to not be correct.

Research Questions 2.6 and 2.7 questioned the ability of the measurement bases to satisfy these criteria in general and with specific reference to livestock. Propositions 2.12, 2.13, 2.14, 2.15, 2.16, 2.17, 2.18, 2.19, 2.20, and 2.21 related to the qualitative characteristics of accounting information as outlined in Statement of Accounting Concepts No 3 (SAC3) and which measurement base users perceive to be the most reliable, relevant, comparable and understandable, both in general and with specific reference to livestock.

It was considered that historical cost would be considered the most reliable measurement base in general, current replacement cost and net current market value would be considered the most relevant, current replacement cost the most comparable and historical cost the most understandable.

As shown in section 6.5.1 historical cost is considered by users to be the most reliable measurement base in general, followed by net current market value, current replacement cost the most relevant (followed by net current market value), current replacement cost the most comparable, followed by historical cost, and historical cost the most understandable, followed by net current market value and current replacement cost. It is interesting to note that net current market value rates highly with users for general purpose financial reporting.

With regard to livestock reporting, it was considered that users would perceive net current market value to be the most reliable, relevant, comparable and understandable measurement base.

It was found, see section 6.6.1, that users did indeed perceive net current market value to be the most reliable, the most relevant, the most comparable and the most understandable measurement base for livestock reporting. Therefore propositions 2.18, 2.19, 2.20 and 2.21 were found to be correct, and the answer to Research Question 2.7 is that users perceive that net current market value satisfies the criteria of relevance, reliability, comparability and understandability with respect to the reporting of livestock in general purpose financial reports.

7.4 Conclusions from the Study

Users are divided about the most appropriate classification for livestock in general purpose financial reports, however clearly do not believe that livestock warrants a separate classification. This does not support the recommendation of Discussion Paper No 23 (Roberts et al (1995)) which recommends a separate classification for self-generating and regenerating assets.

However, it can be seen from the results of this survey that users of general purpose financial reports perceive net current market value to be the most reliable, relevant, comparable and understandable measurement base for livestock reporting. These users distinguished clearly between the usefulness (measured in terms of the qualitative characteristics of accounting information as outlined in SAC3) of the measurement bases in general and with specific reference to livestock reporting.

This gives clear support from the users of general purpose financial reports for the recommendation of Discussion Paper No 23 (Roberts et al (1995)), and supported by many others in the literature, for the use of net current market value for the valuation of livestock in general purpose financial reports.

7.5 Limitations of the Study

There are a number of limitations of this study. Whilst the sample size was sufficiently large, the low response rate resulted in only a small number of useable responses. As a result no complex statistical computations could be undertaken, and no meaningful subgroup analysis could be performed.

In addition, it is possible that, whilst the sample was representative of the population, the respondents may not have been, i.e. those who did not respond to the survey may have responded in a different way. If this is the case then inferences about the population should not be made based on the responses of a non-representative group.

7.6 Implications of the Study

The results of this study have implications for the valuation of other self-generating and regenerating assets.

It can be seen from the research that users are clearly able to distinguish between different assets, and do not believe that they should all be valued in the same manner.

As the discussion paper (Roberts et al (1995)) is 'on the table', and the accounting monograph on measurement is soon to be released, it is timely to ascertain the views of users on these issues. After all, they are the ones for whom the general purpose financial reports are prepared according to Statement of Accounting Concepts No 2 (SAC2).

7.7 Recommendations for Further Research

Due to the limitations of this study as a result of the low response rate, further research into user perceptions would be valuable.

In addition, research into the area of how to treat any change in value resulting from a change in valuation method is required. Although the issues of asset valuation and income/revenue recognition are inexorably linked, for discussion purposes they are decidedly separate issues. This study dealt specifically with the issue of valuation of assets on the statement of financial position. The issue of the treatment of any increase in value and thus revenue recognition was beyond the scope of this study, and warrants further research.