

**Accounting for SGARAs –
Has Comparability and Consistency Been Achieved?**

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29th May 2007

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ABSTRACT

The accounting standard, AASB 1037 'Accounting for self-generating and regenerating assets' (SGARAs) was introduced into the Australian financial reporting arena for the financial year ending 30 June 2001. Prior to the introduction of this standard, there was no regulatory guidance provided by the standard setters. With the adoption of international standards into Australia from 01 January 2005, AASB 1037 has effectively been replaced by its international equivalent, AASB 141 'Agriculture'.

This study examines whether the objectives of consistency and comparability have been achieved through the implementation of AASB 1037 and the subsequent adoption of AASB 141. A triangulated approach is adopted utilising mail survey and interview techniques to collect data.

The results indicate that consistency in measurement methods has not been achieved by the introduction of a prescribed accounting method under AASB 1037 with firms utilising a variety of measurement methods. By not applying the same accounting methods, this has also impaired comparability between firms and across industries.

Consistency was found to have been achieved through measurement methods having been applied consistently over time and the type of measurement methods being applied to three SGARAs, being grapes, native forests and plantation timber. In the case of AASB 141, conflicting results were received from the mail survey and interviews respectively. In terms of the application of AASB 141, it is too early to tell if consistency has been achieved.

TABLE OF CONTENTS

Chapter 1 : Introduction

1. Introduction	1
2. Research Questions	2
3. Contributions of this Study	5
4. Overview of this Study	5
5. Conclusion	7

Chapter 2 : Development of the SGARA Standard

1. Introduction	9
2. Development of the SGARA Standard	9
<i>2.1 Towards the Development of a Standard</i>	9
<i>2.2 Discussion Paper 23</i>	10
<i>2.3 Exposure Draft 83</i>	13
<i>2.4 AASB 1037/AAS 35</i>	14
<i>2.5 AASB 1037A/AAS 35A</i>	16
3. Key Terms and Definitions	17
<i>3.1 Self-Generating and Regenerating Assets (SGARAs)</i>	17
<i>3.1.1 Asset</i>	18
<i>3.1.2 Self-Generating and Regenerating</i>	19
<i>3.1.3 Definition Subsequently Adopted in AASB 1037</i>	20
4. Development of the International Standard	21
<i>4.1 Definition</i>	22
<i>4.2 Reliability Presumption</i>	23

5.	Literature Review	25
6.	Summary	41

Chapter 3 : Hypotheses Development

1.	Introduction	42
2.	Overview of Hypotheses	42
	Measurement Method	43
	Comparability Over Time	45
	Consistency by SGARA Type	47
	Information Systems	49
	International Adoption	50
3.	Summary	52

Chapter 4 : Methodology

1.	Introduction	54
2.	Choosing a Research Method	54
	<i>2.1 Introduction</i>	54
	<i>2.2 Research Methods Utilised</i>	54
	<i>2.3 Justification of Research Methods Utilised</i>	55
3.	Industry	56
4.	Mail Survey	58
	<i>4.1 Mail Survey Subjects</i>	58
	<i>4.2 Resulting Sample Size</i>	59
	<i>4.3 Preparation of Survey Instrument</i>	60
	<i>4.4 Survey Questions</i>	60

4.5	<i>Pilot Testing</i>	61
4.6	<i>Mail Out of the Survey</i>	61
4.7	<i>Receipt of Surveys</i>	62
4.8	<i>Response Rates</i>	63
4.9	<i>Non-Response Bias</i>	63
4.10	<i>Results Testing</i>	67
5.	Hypotheses Testing	68
6.	Interviews	73
6.1	<i>Interview Subjects/Sample</i>	73
6.2	<i>Gaining Access to Interview Subjects</i>	74
6.3	<i>Pilot Testing</i>	75
6.4	<i>Type of Interview</i>	75
6.5	<i>Interview Questions</i>	76
6.6	<i>Interview Material</i>	76
7.	Summary	77

Chapter 5 : Data Analysis and Results – AASB 1037

1.	Introduction	78
2.	Descriptive Survey Data	78
2.1	<i>Introduction</i>	78
2.2	<i>Respondents to the Survey</i>	78
2.3	<i>Firms Surveyed</i>	79
2.4	<i>Firms Surveyed by Industry</i>	80
2.5	<i>Value of Respondent Firms' SGARAs</i>	81

2.6	<i>Application of the Standard</i>	82
2.7	<i>Major SGARA Types</i>	84
3.	<i>Descriptive Interview Data</i>	84
3.1	<i>Introduction</i>	84
3.2	<i>Interviews</i>	85
4.	<i>Analyses</i>	86
4.1	<i>What Measurement Methods are Used by Firms in Accounting for SGARAs under AASB 1037?</i>	86
4.1.1	<i>Mail Survey Responses</i>	86
4.1.1.1	<i>Why Did Firms Not Utilise The Net Market Value Method?</i>	89
4.1.1.2	<i>Analysis of Most Utilised Measurement Method</i>	90
4.1.1.3	<i>Analysis of Firms That Had Not Yet Applied AASB 1037</i>	91
4.1.2	<i>Interviewee Responses</i>	92
4.2	<i>Have the Measurement Methods Used in Accounting for SGARAs Been Applied Consistently Over Time?</i>	94
4.2.1	<i>Mail Survey Responses</i>	94
4.2.1.1	<i>Consistency Between AASB 1037 and AASB 141</i>	95
4.2.2	<i>Interviewee Responses</i>	96
4.3	<i>Does the Type of SGARA Determine the Measurement Method?</i>	98
4.3.1	<i>Mail Survey Responses</i>	98
4.3.1.1	<i>Respondents' SGARA Types</i>	99
4.3.1.2	<i>Measurement Methods Prior to AASB 1037</i>	102
4.3.2	<i>Interviewee Responses</i>	104

4.4. Does the Information System That is Adopted by the Firm	105
Determine the Measurement Method?	
4.4.1 Mail Survey Responses	105
4.4.1.1 Respondents That Had Not Developed Information Systems	108
4.4.2 Interviewee Responses	109
5. Summary	110
<u>Chapter 6 : Data Analysis and Results – AASB 141</u>	
1. Introduction	111
2. Analyses	111
2.1 What Measurement Methods will be Used by Firms in Accounting for Agricultural Assets under AASB 141?	111
2.1.1 Mail Survey Responses	111
2.1.2 Interviewee Responses	114
2.2 The Implementation Process of AASB 141	119
2.3 What is the Public's Point of View on this Accounting Standard?	120
2.4 Was there any Influence from Within each Industry in Choosing Particular Measurement Methods?	123
2.5 Was it the Right Decision of Standard Setters to Comply with the International Standards at this Time?	124
2.6 Future Developments of the Accounting Standard	126
2.7 Has Consistency and Comparability Been Achieved Through the Introduction of AASB 1037 and the Subsequent Adoption of AASB 141?	128
3. Summary	130

Chapter 7 : Discussion and Conclusion

1.	Introduction	131
2.	Results – AASB 1037 Analysis	131
	<i>2.1 Hypothesis One</i>	131
	<i>2.2 Hypothesis Two</i>	133
	<i>2.3 Hypothesis Three</i>	134
	<i>2.4 Hypothesis Four</i>	136
	<i>2.5 Summary</i>	137
3.	Results – AASB 141 Analysis	138
	<i>3.1 Hypothesis Five</i>	138
	<i>3.2 Transition From a Local Standard to an International Standard</i>	141
	<i>3.3 Summary</i>	143
4.	Limitations of Study	144
5.	Future Research and Opportunities	145
	Appendices	146
	Bibliography	158

APPENDICES

Appendix One	Exposure Draft 83	146
Appendix Two	Mail Survey	148
Appendix Three	Interview Questions	156

LIST OF TABLES

Table 2.1	Towards the Development of a Standard – Key Documents	10
Table 2.2	ED 83 Submissions	14
Table 2.3	Summary of Documents and Definitions	23
Table 2.4	Other SGARA Related Industries Survey Response Rate	30
Table 2.5	Alternative Measurement Methods	33
Table 2.6	Measurement of SGARAs Under AASB 1037	40
Table 4.1	Response Bias Results	66
Table 5.1	Mail Survey – Type of Firm That Responded	79
Table 5.2	Mail Survey - Category of Firm That Responded	73
Table 5.3	Mail Survey - Business Structure of Firm Surveyed Categorised by Industry	81
Table 5.4	Mail Survey – Value of Respondents SGARAs	82
Table 5.5	Mail Survey - Financial Year in Which Respondents First Applied AASB 1037	83
Table 5.6	Mail Survey - Measurement Methods (Including Adopters and Non-Adopters of AASB 1037)	87
Table 5.7	Mail Survey - Measurement Methods (With Firms That Have Not Yet Adopted AASB 1037 Excluded)	88
Table 5.8	- Mail Survey - Measurement Methods Utilised by Firms That Apply AASB 1037 Test Statistics	89
Table 5.9	Mail Survey - Measurement Methods (Firms That Have Not	92

Yet Applied AASB 1037)

Table 5.10	Mail Survey - Percentage of Respondents Who Applied Measurement Methods Consistently	94
Table 5.11	Mail Survey - Proposed Measurement Methods Under AASB 141	95
Table 5.12	Mail Survey - Does the Type of SGARA Influence the Measurement Method Chosen?	99
Table 5.13	Mail Survey - Main Categories of SGARAs	100
Table 5.14	Mail Survey - Cross-Tabulation of SGARA Categories and Measurement Methods	101
Table 5.15	Interviewee Firms - Categories and Measurement Methods Utilised	104
Table 5.16	Mail Survey - Development of Information Systems Capable of Measuring Net Market Value by Implementation Date	106
Table 5.17	Mail Survey – Test Statistics	107
Table 5.18	Interviewee Firms – Measurement Methods by Corporation	110
Table 6.1	Mail Survey – Measurement Methods Proposed Under AASB 141	113
Table 6.2	Mail Survey – Measurement Methods Proposed under AASB 141 - Test Statistics	113- 114

CHAPTER 1 : INTRODUCTION

1. Introduction

A wide variety of accounting practices were being adopted in relation to accounting for SGARAs prior to formal accounting regulations in Australia being adopted. It was believed that there was a need for an accounting standard to rectify this situation to improve the information available to users by improving the comparability and consistency of financial reporting for SGARAs. The process of developing such an accounting standard commenced in earnest in 1995 with the release of Discussion Paper 23 (Roberts *et al.*, 1995). After almost six years of due process, AASB 1037 was released to take effect from financial years on or after 30 June 2001 for applicable entities within Australia. The standard was intended to overcome the lack of accounting regulatory guidance regarding the treatment of living assets held by firms.

AASB 1037 was used extensively in the development of the international accounting standard, IAS 41 which was released in December 2000 to be implemented from 01 January 2003. This path was taken as Australia had led the way in developing a standard in this area, and remained the only country with a specific SGARA standard. With the adoption of international standards in Australia AASB 1037 has now been replaced by AASB 141. This study intends to make an assessment of the adoption of the AASB 1037 standard, and then to make comment on the adoption of IAS 41 (AASB 141). The research questions are developed and discussed in the next section.

2. Research Questions

The need to develop regulatory requirements in this area was motivated by the wide diversity of accounting practices in the reporting of SGARAs within Australia. Diversity in practice meant the comparability criterion in the AASB Framework¹ could not be guaranteed. As a result, this could cause difficulties in comparing the financial results of firms within and across industries where living assets were held, making an assessment of well being difficult or near impossible. It was argued that the development of an accounting standard would foster consistent valuation practices and thereby enhance the comparability of financial reporting (Roberts *et al.*, 1995).

In this area of financial accounting, there is limited research. This study undertakes to test whether the underlying objective of comparable and consistent reporting practices have been achieved through the implementation of AASB 1037. Since this was an underlying motivator for the development of regulation for these types of assets, it is important to establish whether it was successful, and whether or not AASB 141 will enjoy the same level of success (or failure as the case may be).

¹Effectively replaced Accounting Concepts SAC 3 'Qualitative Characteristics of Financial Information' from 01 January 2005.

To consider the aspects of comparability and consistency, the following research questions are posed:

1. What measurement methods are generally used by firms in accounting for SGARAs under AASB 1037?

The standard proposes that firms utilise the net market value in an active and liquid market method. By requiring that firms adopt a consistent measurement method, the objective of comparability should be achieved since the basis of measurement would be consistent across all firms. By seeking information regarding the methods adopted by firms it may be possible to determine whether or not the objective of comparability and consistency has been achieved.

2. Have the measurement methods used in accounting for SGARAs been applied consistently over time?

This question will determine if firms have applied measurement methods consistently over time. It looks at both, the application of measurement methods prior to the implementation and since the implementation of the standard. In applying methods consistently, the objective of comparability may be achieved across firms and across industries.

3. Have firms adopted particular measurement methods for different types of SGARAs?

Does the type of SGARA determine the measurement method chosen by firms. It is anticipated that the methods chosen by firms are influenced by the type of

SGARA they hold. In doing so, the objective of comparability may be achieved as the basis of measurement would be consistent across SGARA types across firms.

4. Is the measurement method adopted determined by the accounting information system in place?

It is anticipated that for firms that had developed information systems which were capable of recording reliable net market valuations, they would utilise the net market value method as prescribed under the accounting standard, AASB 1037. For firms that had not developed such information systems, it is anticipated that they would utilise methods other than the net market value method. For those firms that had developed such information systems, it is anticipated that the objective of comparability and consistency would be achieved since the basis of measurement would be consistent.

5. What measurement methods will be used by firms in accounting for biological assets² under AASB 141?

AASB 141 focuses on biological assets that are utilised in agricultural activities as opposed to SGARA assets under AASB 1037. The standard proposes that firms utilise the active market method in accounting for biological assets. By requiring firms to utilise a consistent measurement method, the objective of comparability should be achieved under the standard since the basis of measurement would be consistent across all firms.

² Refer Chapter 2, Section 4.1 for definition of biological assets.

3. Contribution of this Study

This study will fill a gap in the literature by identifying whether the intentions of the regulators in adopting AASB 1037 were a success. That is, whether two of the qualitative characteristics of general purpose financial statements, namely comparability and consistency have been met with the introduction of AASB 1037 and are expected to be with the subsequent adoption of AASB 141. This study will also provide additional evidence about the issues faced by Australian firms surrounding the processes leading to the introduction of a new accounting standard initially at the domestic level and then its conversion to an international standard.

4. Overview of this study

This study is undertaken by adopting a triangulated approach, collecting both mail survey and interview data with a selection of respondents. The intention being to enrich the mail survey data with the views of a number of senior managers in firms that account for SGARAs. Jick (1979) has argued that this approach will allow the researcher to obtain a more complete picture of the area being investigated.

The study was confined to two main industries, the forestry and the wine industry. Both of these industries had been active in their opposition to the introduction of this type of accounting standard and continue to be so today. These industries were chosen for this study to examine whether this opposition is warranted or is it simply rhetoric with no form or basis. This study considers whether this accounting standard has brought about consistency and comparability in financial reporting for SGARAs given that the representatives of the industries included in this study have argued it would not.

Subjects for the mail survey were chosen in two stages. The first stage included all firms that were identified as firms that were required to comply with the AASB 1037/AAS 35 requirements³. This provided a total of 35 firms. Stage two targeted firms that were not required to comply with AASB 1037/AAS 35 requirements. A random sample of 110 firms was taken from this grouping. The resulting sample size from both stages totalled 145 firms.

The survey was distributed to the sample group in February 2004. Thirty-seven useable responses were received, representing a useable response rate of 30.83%. The survey was designed to gather data to enable the research questions posed to be answered.

Two interviews were conducted during the period October-November 2005. The interviews were conducted with two aims: first, to explore and re-examine the research questions posed, and the second aim was to explore the process of transition from AASB 1037 to AASB 141 and issues surrounding the accounting standard.

The interview subjects were chosen from stage one of the mail survey sample. There being only a small sample selection to choose from, one firm from each of the winery and forestry industries was chosen. The firms were chosen using maximum variation sampling, a form of purposeful sampling. It was expected that by choosing one firm from each industry, it would provide a range of cross-sectional results. Interviews were conducted utilising a standardised open-ended interview technique after Patton (1990). Whilst the interview subjects were taken through this standardised open-ended form of

³ Listed Australian public companies and state public authorities.

interview, where participants raised issues or points of interest they were encouraged to explore and discuss these further.

5. Conclusion

In this chapter the study to be undertaken was introduced together with the research questions that are to be examined. This thesis is organised into the following six chapters. Chapter two will examine the development of the accounting standards, AASB 1037 and AASB 141. In this chapter a review of the literature will also be considered.

The hypotheses to be tested in this study will be developed in chapter three. These hypotheses will examine the measurement methods adopted by firms in accounting for SGARAs under AASB 1037 and the subsequent international standard, AASB 141. Other hypotheses will examine the comparability and consistency of measurement methods over time and by SGARA type and the development or non-development of information systems by firms in accounting for SGARAs. Chapter four covers the specific data collection and analysis techniques used in the investigation. The study incorporates a triangulated method approach utilising both mail survey and interview techniques. The chapter provides justification of this approach and an analysis of how the two research techniques were utilised and undertaken in this study.

In chapter five, the results of the mail survey and interviews that related to AASB 1037 are discussed. In chapter six the results from the mail survey and the interviews that related to the international accounting standard, AASB 141 are analysed and discussed. In chapter seven, the key findings of the study are discussed. This is followed by an examination of the limitations of the study. Finally, directions and opportunities for future research are discussed.

In the next chapter the processes leading to the development of the two accounting standards, and a literature review will be undertaken.

CHAPTER 2 : DEVELOPMENT OF THE SGARA STANDARD

1. Introduction

This chapter considers the decision-making process that resulted in the introduction of AASB 1037 and the subsequent international standard, AASB 141. The literature in this area is then reviewed to enhance understanding of the processes that were involved.

2. Development of the SGARA Standard

Prior to the introduction of formal accounting regulations, there was a lack of guidance provided by the accounting regulators and the accounting profession in regard to accounting for SGARAs in Australia. This lack of guidance had been perceived to have brought about a wide diversity of practice with respect to the recognition, disclosure and measurement of information about SGARAs in general purpose financial reports (Roberts *et al.*, 1995). There was wide recognition that this situation was not desirable as it led to a lack of comparability and consistency in financial reporting, both within and between industries. In terms of the qualitative issues identified by the Conceptual Framework, there was a clear inconsistency between what should be and what was. Staunton *et al.* (1992) argued that this diversity also resulted in a lack of clear theory in addressing SGARAs.

2.1 Towards the Development of a Standard

In an attempt to overcome this lack of guidance, in 1995, the Australian Accounting Standards Board and the Public Sector Accounting Standards Board (the Boards) commenced the process of developing an accounting standard that addressed these issues with the release of Discussion Paper 23. Whilst this paper was the first step of

many into the development of an accounting standard in Australia, this discussion paper was also expected to provide valuable input into the eventual development of an international standard by the International Accounting Standards Committee (IASC). This may well have been a motivating factor in the Board's decision to produce such a standard. That is, to provide input into the international standard setting process and to be seen as leading the world in the standard setting process in regards to SGARAs.

Discussion Paper 23 was followed by an Exposure Draft (83) (ED 83) in August 1997 and then the standard, AASB 1037 in August 1998. This progression is shown in Table 2.1 which sets out the key release dates of the documents that led to the eventual development of the SGARA standard in Australia.

Table 2.1
Towards the Development of a Standard – Key Documents

Document	Issue Date
Discussion Paper 23	May 1995
Exposure Draft 83	August 1997
AASB 1037/AAS 35	August 1998
AASB 1037A/AAS 35A	July 1999

2.2 Discussion Paper 23

The Board's objective in releasing Discussion Paper 23 was to stimulate debate amongst those with an interest in the financial reporting of SGARAs by identifying and analysing particular issues relating to financial reporting for such assets (Roberts *et al.*, 1995).

The paper adopted a limited focal point, by concentrating on the forestry and livestock industries. Other SGARA related industries, such as agriculture, orchards and viticulture were considered, but only briefly. Roberts *et al.* (1995) justified this limitation by arguing that the forestry and livestock industries were:

- (a) Major contributors to, and have a significant impact on, the Australian economy;
- (b) Specifically excluded from the accounting standards regime;
- (c) Featured prominently in the professional accounting literature and hence, a greater level of the relevant issues existed than for any other SGARA-related industries such as aquaculture;
- (d) Many of the relevant issues relating to financial reporting for SGARAs were significant for the forestry and livestock industry; and
- (e) Forests are long-lived resources relative to livestock and most other SGARAs (p. 3-4).

Roberts *et al.*, (1995) provided a further justification based on the plant/animal dichotomy that was commonly accepted at the time in SGARA-related industries as a useful means of classifying SGARAs. They surmised that any conclusions that were to be drawn could be extrapolated across all SGARA industries as the forestry and livestock industries were considered fair representations of the plant and animal category respectively.

In hindsight, perhaps the conclusion reached by Roberts *et al.*, (1995) was too broad. Whilst these two industries were major contributors to the Australian economy at the time of the study and continue to be now, they do not represent all SGARA types within Australia. Each individual industry has its own idiosyncrasies, issues and concerns which cannot simply be ignored by the application of a 'broad brush'

accounting standard approach. In the subsequent Exposure Draft 83 respondents echoed similar concerns when considering the application of the same measurement method across all SGARA industries.

Examples of such comments were as follows:

‘To apply the same accounting principles to short-term agricultural activities, such as market gardening, as well as to very long-term activities such as forestry is considered inappropriate’ Futuris Corporation

Further, *‘Application of the same general accounting principles to activities which could yield two or three crops in a 12 month period, to say a forest which takes 10 to 40 years to mature is, in our opinion, clearly inappropriate’* Southcorp Limited (AASB – Exposure Draft 83 Submissions File, 1998).

Both of these comments highlight the fact that there are a wide range of agricultural industries in Australia and the usage of the same accounting technique across all industries may not be appropriate.

The Boards successfully stimulated debate with the release of DP 23. Accounting for SGARAs was seen to be a controversial step as it would represent a revolution in the way many of the affected businesses would have to account for their activities (Moodie, 2000). It was also considered that the financial reporting of SGARAs would give rise to several challenging accounting issues (Keys, 1995) including how to measure the SGARAs and how to disclose the SGARAs in financial statements.

2.3 *Exposure Draft 83*

Following the release of DP 23, the Boards issued Exposure Draft 83 ‘Self Generating and Regenerating Assets’ in August 1997 with a comment period ending on 31 December 1997. The Boards invited comments¹ on a raft of areas including the following:

- Whether the exposure draft, in general, was supported;
- The proposed definitions of the standard;
- The proposed method of measurement under the standard;
- The proposed requirement to report changes in the carrying value of the SGARA in the income statement;
- The proposed specific disclosure requirements under the standard.

Forty-six (46) written responses on ED 83 were received by the Boards (Exposure Draft 83: Submissions File, 1998). Responses were received from a number of respondent groups with the major contributors being from accounting firms and two industry groups, being the wine and the forestry sector, as shown in Table 2.2. These two industry groups are the focus of this study².

¹ Refer Appendix One for further detail.

² Refer Chapter 5, section 3 for justification on choice of industry.

Table 2.2**ED 83 Submissions**

Industry Group	Number of Firms	% of Total
Academia	4	8.71
Accounting Firms	11	23.91
Representative Body	1	2.17
Accounting Professional Body	2	4.35
Valuer	2	4.35
User	1	2.17
Public Sector Treasury	3	6.52
Winery	6	13.04
Forestry	10	21.74
Livestock	2	4.35
Orchardist	1	2.17
Diverse Corporate Firm	1	2.17
Cotton Grower	2	4.35
Total	46	100

2.4 AASB 1037/ AAS 35

The subsequent standard, AASB 1037/AAS 35 ‘Self Generating and Regenerating Assets’, approved on 6th August 1998, retained the basic structure and content of ED 83 (AASB 1037 - Development of the Standard, paragraph 7, 1998). The standard was to be operative for reporting periods ending on or after 30 June 2000 but could be applied earlier by firms. The Boards provided close to a two-year time lag between

when the standard was issued and when the standard was required to be operative to ensure that firms understood and could implement the new standard requirements correctly.

Further, this had been a busy time for the AASB with the Boards having issued seven other accounting standards during the previous 12 month period. This had put considerable pressure on companies ensuring that they understood and met all the standard requirements. As considered by Ken Spencer (Ravlic, 2000), the then chairman of the AASB:

'I accept that we have made it pretty difficult (for accountants and companies). We're trying to overcome that by having a longer period between the issue of a standard and its application date than might otherwise have been the case'.

There were a number of benefits expected to flow from the adoption of AASB 1037. It was considered that the measurement of SGARAs at net market value would permit comparisons of SGARAs having substantially the same characteristics, regardless of their purpose, and when, by whom and how they were acquired (AASB 1037, paragraph 5.2.3, 1998).

By valuing the assets at net market value, it would potentially ensure that the current value of the firm's SGARA assets was captured at any one point in time. This is in comparison to the valuation of the assets under a historical cost basis, where the current value of the asset is not recorded until they are sold. Utilising the net market value is seen as providing a more relevant measure of the periodic performance of the SGARAs as it captures the value of growth of the asset, which is not reflected when utilising historical cost valuations.

Further, paragraph 5.2.4 (AASB 1037, 1998) states that these measures would provide more consistent measurements between entities and between SGARAs of the same entity. Other benefits expected to flow from this standard included the financial reports being more relevant to users. It was also anticipated that the standard would provide a relevant basis for assessing stewardship of the entity's management or governing body. This study examines two of the expected benefits of the standard in asking has comparability and consistency been achieved through the introduction of AASB 1037 and the subsequent implementation of AASB 141.

2.5 AASB 1037A/AAS 35A

The Boards were advised prior to the operative date that some constituents were encountering practical implementation problems in adopting AASB 1037. Firms were having problems understanding the new rules and needed more time to determine how they were going to gather the necessary information required under the standard (Ravlic, 2000). In July 1999, the Boards, in response to this advice, delayed the commencement date by one year (AASB 1037A, paragraph 3.1(a), 1999) to 30 June 2001.

The extension was granted to provide sufficient time for firms to develop the necessary systems that were required to account for SGARAs and to provide representative bodies of SGARA-related industry groups time to coordinate the development of implementation guidance (AASB 1037A - Development of The Standard, 1999).

Within the next section, key terms and definitions will be discussed that underlie the accounting standard, AASB 1037. In the lead up to the development of the standard, there was much discussion on what should be included and what should not be

included in the definition of a SGARA. A number of individuals and firms lobbied for exclusions under the standard. For example, SGARA assets with short-term cycles of less than one year and grape vine assets were considered by many that they should be excluded from any proposed definition on SGARAs.

The setting of the definition was considered a very important issue as it helped to identify what assets would be embraced by the standard requirements and what assets would be excluded under the standard. This definition provided the framework for the standard. The framework was intended to bring about comparability and consistency between firms across different industries. It would help to ensure that for those firms that held living assets, the assets would have to be accounted for in accordance with the standard if they met the definition of a SGARA.

The framework of the standard, being the key terms and definitions are now discussed.

3. Key Terms and Definitions

3.1 Self-Generating and Regenerating Assets (SGARAs)

The term ‘self-generating and regenerating assets’ is now defined. This term is defined to determine which assets meet the requirements and are therefore required to apply AASB 1037. To simplify the term, it will be separated into two components – ‘Asset’ and ‘Self-Generating and Regenerating’.

3.1.1 Asset

To be recorded in a firm's balance sheet, a SGARA must meet the definition of an asset and satisfy the criteria for recognition as set down in the AASB Framework³. The term 'asset' is defined in the AASB Framework (paragraph 49, 2004) as follows:

An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow from the entity.

Therefore, for a SGARA to be defined as an asset, the entity must have control over that asset. The SGARA asset must have been as a result of a past event. For example, the entity must have purchased that asset or produced it. There also must be future economic benefits embodied in the SGARA asset. That is, there must be the potential to contribute, directly or indirectly to the flow of cash and/or cash equivalents to the entity (AASB Framework, paragraph 53, 58, 2004).

The AASB Framework further examines the criteria required for recognising assets. Paragraph 89 states:

An asset should be recognised in the balance sheet when:

- a) It is probable that the future economic benefits will flow to the entity; and*
- b) The asset has a cost or value that can be measured reliably.*

³ Effectively replaced SAC 4 'Definition and Recognition of the Elements of Financial Statements'

This recognition criteria is encompassed in AASB 1037 (paragraph 5.1, 1998). In paragraph 5.11, it is stated that it would be considered rare that SGARAs held primarily for sale or otherwise to generate profit could not be measured reliably. Where it is probable that future economic benefits embodied within the SGARA will eventuate and the cost of the SGARA can be measured reliably, the SGARA will meet the criteria required for recognising as asset, as defined in paragraph 5.1.

Therefore, if the SGARA meets the above definition requirements and the criteria required for recognising an asset, it will be considered an asset and can be recorded in the balance sheet. What type of asset though is a 'self-generating and regenerating' asset? This term will now be examined.

3.1.2 *Self-Generating and Regenerating*

Goyen & Roberts (1991) examined the idea of SGARAs more fully seeking to explain what a SGARA exactly was. They suggested that the term 'self-generating and regenerating' could be explained as '*self-production and reproduction, growth and procreation, natural development and the bringing into existence*'. Based on this view, they defined a SGARA as;

'Non-human living assets which, due to inherent capacity for growth, production, procreation and degeneration, contain economic benefits and service potential which are subject to continual variations during their lifetime'.

This definition was later refined in DP 23 as a '*non-human-related living asset*'. No justification was provided for this refinement. With the use of such a broad and encompassing definition though, this ensured that many firms would be required to

comply with any future accounting standard requirement that otherwise may not have been bound under the previously proposed definition. This would potentially help to bring about comparability and consistency between firms across different industries.

This was the definition later adopted in ED 83 with the exception that the wording 'related' was removed from the definition. The phrase 'non-human' was considered necessary to distinguish plants and animals from human resources whilst the phrase 'living asset' was intended to apply to assets, regardless of the length of production cycle, or how they were created (ED 83, paragraph 9.1.1 - 9.1.2, 1998).

3.1.3 Definition Subsequently Adopted in AASB 1037

The definition adopted under AASB 1037 retained the same definition and exclusions proposed under ED 83, that is 'non-human living asset'. The term 'non-human' had the same meaning of that of ED 83 (AASB 1037, paragraph 10.1.2, 1998) whilst the term 'living assets' applied to assets that change biological form over their lives through growth and other means, resulting in changes in future economic benefits (AASB 1037, paragraph 5.2.1, 1998). This requirement of 'living' in the definition meant that once biological change ceases, the SGARA definition is not satisfied (Reilly *et al.*, 1999). By adopting such a broad definition in AASB 1037, the Boards ensured that the standard was not selective in relation to particular industries or groups, but rather was all encompassing.

With the adoption of international standards from 01 January 2005, AASB 1037 has now been effectively replaced with AASB 141. In the next section, issues that surrounded this change from AASB 1037 to AASB 141 are commented on, and differences between the two standards as they relate to SGARAs are identified.

4. Development of the International Standard

From 01 January 2005, the international standard (IAS 41) equivalent AASB 141 effectively replaced the SGARA standard, AASB 1037, in Australia. Applicable entities are now required to meet the requirements of this international standard. In the developmental stages of the international standard, the AASB 1037 standard provided the basis for IAS 141 'Agriculture'.

With the pending implementation of international standards, the AASB completed a post-implementation review of AASB 1037/AAS 35 in 2003. The review was aimed at identifying any post-implementation AASB 1037 issues and potential convergence issues associated with the international standard. The review involved a mail survey of 109 affected preparers, auditors, valuers and users. Twenty six responses were received from questionnaire participants⁴ (AASB SGARAs Questionnaire, 2003). However, due to confidentiality restrictions, response results will not be made available to the general public.

⁴ Verbal advice received from staff member at AASB (M Ledden, 06/10/03). The results have only been made available to AASB and IASC members and staff.

Whilst AASB 1037 formed the basis of IAS 41, there are some major differences between the two standards. These differences are now examined.

4.1 *Definition*

AASB 1037 focuses on the recognition, measurement and disclosure of SGARA assets whilst AASB 141 focuses on agricultural activities. What are agricultural activities? Agricultural activities are the management of the biological transformation of biological assets for sale, into agricultural produce or into additional biological assets as considered in paragraph five of AASB 141. Biological assets are defined in paragraph five as '*living animals or plants*' and must relate to agricultural activity to be subject to the standard requirements (AASB 141, paragraph 1, 2003).

In comparing the definition of biological assets to the SGARA definition under AASB 1037, AASB 141 is more restrictive than AASB 1037 as it excludes non-human living animals and plants that do not relate to agricultural activity, and non-human living assets other than plants and animals. Table 2.3 provides a summary of the definition utilised for SGARA assets⁵ from the commencement of the standard setting process to the present time, under the international standard, AASB 14

⁵ For the purposes of this study, the definitions that are utilised are as per the AASB 1037 and AASB 141 definition.

Table 2.3**Summary of Key Documents and Definitions**

Document	Asset	Definition
DP 23	SGARA	non-human-related living asset
ED 83	SGARA	non-human living asset
AASB 1037	SGARA	non-human living asset
AASB 141	Biological Assets	living animals or plants

Under the current definition of AASB 141, the standard has had the effect of excluding a number of Australian companies that had previously utilised AASB 1037 but were not in the agricultural industry. For example, this included such companies as Earth Sanctuaries Limited (ESL), being a public company involved in the breeding and preservation of fauna. At the time, the application of AASB 1037 by companies such as this was seen as being a controversial move and was considered as not being within the ‘spirit’ of the accounting standard by many. The move to AASB 141 has allowed for a clearer definition of who can apply the standard. With these types of assets now excluded from the international standard, companies such as ESL, can no longer apply this accounting standard.

4.2 Reliability Presumption

AASB 1037 prescribes that SGARAs are to be measured at net market values (AASB 1037, paragraph 4.1, 1998). The net market value of a SGARA is defined in paragraph 10.1, as the amount, which could be expected to be received from the disposal of the SGARA in an active and liquid market after deducting costs expected to be incurred in realising the proceeds of such a disposal.

AASB 141 prescribes that biological assets and agricultural produce harvested from an entity's biological assets are to be measured at fair value less estimated point-of-sale costs (AASB 141, paragraph 12, 13, 2003), except in the case where the fair value cannot be measured reliably. This exception is known as the reliability presumption and is considered a key difference between the two standards. Under AASB 1037, there is no such corresponding presumption

The presumption under AASB 141 prohibits the use of fair value accounting where the fair value of the biological asset is not available. Under paragraph 8 of AASB 141, the fair value is defined as *'the amount which could be exchanged or a liability settled between knowledgeable, willing parties in an arms length transaction'*. The meaning of this term is identical to that of the term 'net market value' under AASB 1037. Thus, fair value equates to net market value.

Under paragraph 30 of AASB 141, this presumption can be rebutted only on initial recognition of a biological asset where market determined prices are not available and for which alternative estimates of fair value are seen to be unreliable. Where this occurs, the biological asset is to be measured at its cost less any accumulated depreciation and any accumulated impairment losses. In contrast to AASB 141, it is assumed under AASB 1037, that the net market value of SGARAs can always be reliably measured (AASB 141, Appendix A.4, 2003).

In the next section a review of the literature will be discussed.

5. Literature Review

In the development of the regulatory framework for SGARAs, there was significant discussion and debate on the various issues surrounding the introduction of such an accounting standard. Leading the discussion at the exposure draft stage was what to include or not to include in a proposed definition of a SGARA. With a wide encompassing definition decided upon with the release of AASB 1037, this ensured many types of assets were classified as SGARAs including trees, plants, livestock, consumable crops and fruit-bearers. There have been numerous previous attempts to classify the many types of SGARAs into categories.

The existence though of these many different and in numerous cases, overlapping classifications for the different SGARA types has typically caused confusion. Examples of such classifications that have been conducted include classifications based on (Goyen & Roberts, 1991):

- Biological relationships – Reid (1981) developed a classification scheme based on type of agricultural assets;
- Economic classifications – The Australian Bureau of Statistics uses various economic classifications, with the most fundamental classification for SGARAs being the industry group ‘Agriculture, Forestry and Fishing’;
- Functional classifications -
 - Australian Committee for Coding Rural Accounts (ACCRA) (1970) developed a national code and chart of accounts for rural accounting.
 - Neilson (1986) classified SGARAs for valuation purposes as: fodder and produce, stocks, stud livestock and growing crops.

- The Canadian Institute of Chartered Accountants (CICA) (1986) Research Study 'Accounting and Financial Reporting by Agricultural Producers' presented a balance sheet. This approach was based on whether the asset was to be consumed in the current production cycle (categorised as a current asset) or whether the asset was a productive asset (categorised as an intermediate asset).
- The American Institute of Certified Public Accountants (AICPA) (1987) developed a further separate classification based on functionality as: field and row crops, orchards and vineyards, intermediate-life plants, breeding animals, production animals and animals held for sale.
- Financial Accounting classifications -
 - Goyen & Roberts (1991) developed eight separate taxonomies based on : the characteristics of self-generation as opposed to regeneration, the length of lead-time, length of economic life, number of outputs, nature of output, nature of the production cycle, level of control over the production process, and quantifiability of inventory.
- Physical, Economic and Financial classification -
 - Staunton *et al.*, (1992) extended the classification based on the economic taxonomy of SGARAs which was adopted in the subsequent DP 23, produced by Roberts *et al.*, (1995). The classification was based on classifying SGARAs into plant and animal production categories, consumables or bearers and short or long-term categories.

Whilst there was continual discussion on these classifications, in the subsequent AASB 1037, such a classification scheme was overlooked for the presentation of

SGARAs as a separate category in the Income Statement (AASB 1037, paragraph 6.1.1, 1998). No explanation was provided as to why these schemes were omitted.

There were many other issues in accounting for SGARAs that were discussed and debated. Such issues included the difficulty in valuing certain types of SGARAs as examined by Ravlic (2000). For example, the vineyard industry argued at the time that the valuation of its crops was causing difficulty due to it being part of the land in which it lives. They argued that the vine itself had little value. In valuing the vine, the industry encountered difficulty in separating the components and placing a realistic net market value figure on that vine. Similar concerns were raised by Cummings (2000) but were more directed at different valuation techniques. For example, in determining the value of a vineyard, estimates for crop yields, market factors, useful life and discount rate need to be made. Being estimates, this could bring subjectivity and volatility into the calculations.

Other concerns raised included the standard could cause volatility through the recognition of unrealised gains and losses and lead to greater confusion in capital markets because of the subjectivity of the balance sheet figures (Cummings, 2000, Reilly *et al.*, 1999). However, it was considered by Keys (1998) that it would be reasonable to expect that users of financial reports would read the financial reports in the context of the volatility inherent in the value of SGARAs. Further, management should choose to appropriate an amount of profits to a reserve to indicate to shareholders the potentially undistributable nature of the profits.

Other issues at the time included implementation problems that were being encountered by constituents. Firms were having trouble in understanding the new rules and developing their computer systems to gather the necessary information

required under the standard (Ravlic, 2000). As considered previously, in response to this issue, the Boards delayed the commencement of the SGARA standard by one year to 30 June 2001.

A number of studies have examined firms' measurement methods of SGARAs prior to the implementation of AASB 1037 and attempted to propose what may happen once the standard took effect. Herbohn *et al.* (1998) researched the public and private sector forestry industries' methods of reporting SGARAs for the financial year periods 1991-1995. They undertook a survey of the financial statements of all ASX-listed companies in the forestry industry, additional private-sector entities identified in DP 23 and all state forestry authorities. The final usable sample comprised eight private sector entities and five public state forestry authorities. Their findings showed that a variety of measurement methods and procedures were being used in the forestry industry. It was found that in the private sector the entities were evenly divided between the use of historical cost and net present value method whilst the use of current market values was absent from measurement methods. In relation to those entities that had used the net present value method, it was found that three of the four entities did not disclose how they derived their calculations.

It was also found that of the firms that recognised value changes in forestry assets, only one firm disclosed the value change as an income-adjustment in accordance with the requirements of ED 83 at the time. The other firms treated the total change as a capital-maintenance adjustment through an asset revaluation reserve.

Roberts *et al.* (1995) conducted an empirical review by undertaking a survey of current financial reporting practices in SGARA related industries (forestry, livestock and other) for the year 1990. The sample comprised the larger reporting entities

representative of their industry in Australia. For the forestry and livestock firms, eleven forestry entities (public and private sector) and nine livestock (private sector) entities were chosen and their financial statements were reviewed. No detail was provided as to how or why these particular firms were selected.

For the other SGARA-related industries, a sample of industry participants were selected using references in the literature, including professional, industry journals and the press. A final sample size of seventy-six firms across eight industries was chosen who were then provided with a mail survey of which responses to various issues were sought. No detail was again provided as to why these particular firms or industries were chosen. The number of useable responses from the survey was, in general, very low. As stated by Roberts *et al.*, (1995), the findings for this area were treated more as anecdotal in nature. However, when the results from each industry were examined individually in Table 2.4, it can be seen that the response rate for the dairy and poultry farming was very high with response rates of 80% and over received in relation to the sample size for both industries.

Table 2.4**Other SGARA Related Industries Survey Response Rate⁶**

Industry	Sample Size	Responses	Response Rate (%)
Fruit Growers	6	1	16.67
Aquaculturists	8	3	37.50
Dairies	6	5	83.33
Feedlot Operators	14	0	0.00
Poultry Farmers	5	4	80.00
Stud Farmers	24	3	12.50
Viticulturists	8	0	0.00
Orchardists	5	1	20.00
Total	76	17	

With the results from the other SGARA-related industries not being discussed in depth, the paper concentrated on the forestry and livestock industry results. It was considered that the issues related to these two industries and any conclusions drawn from the paper would be applicable to all SGARAs as these two industries were fair representations of the plant and animal categories. However, with such high response rates for the dairy and poultry farming industries, the authors should have at least discussed these two industry responses in the light of any conclusions drawn from this paper.

The results indicated that considerable diversity existed in the methods used to value forestry and livestock in their respective industries. For the forestry industry, it was

⁶ Data obtained from study of Roberts *et al.*, (1995).

found that historical cost, replacement cost and market value bases were used singularly or in a variety of combinations with no particular forestry valuation method dominating. Whilst for the livestock industry, it was found that five of the nine companies utilised a single basis ranging from current market values, net realisable value and average cost of directors valuation. Of the four remaining companies, the bases used by these companies included lower of cost and net realisable value, standard value, cost and market value. It was found the average cost method dominated in the livestock industry. It was considered that authoritative guidance through an accounting standard was required to reduce these opportunities for diversity of valuation practices, and thereby would increase the comparability of financial reporting.

In relation to value changes, there was found to be a variety of treatments. For example in the private sector forestry entities, three entities indicated that they revalued their forests annually. However, each of these entities recognised the change in the value of the forestry SGARA differently with only one firm recording the forest revaluation change as revenue.

Herbohn & Herbohn (1999) examined the reactions of forest managers to the proposed AASB 1037 regulations, by survey approach. The survey instrument was structured around four major aspects of DP 23, being asset valuations, recognition of changes in asset values, environmental disclosures and balance sheet classification. The survey sample was drawn from the memberships of Plantations Australia and the Australian Forest Growers. These two groups are considered two of the major industry representative groups in Australia, so they provided a good cross-section of the members of the Australian forestry industry.

Members with a minimum plantation size of one hundred hectares were chosen as potential respondents because it was considered more likely that plantation owners of large plantations would prepare financial reports. The procedure for sample selection resulted in a survey sample of seventy-seven, with a response rate of 31% achieved.

The study found that the requirement under DP 23 to bring to account forestry at current market value would result in significant changes to existing practices at that time. Nearly half of the forest managers surveyed (ten out of twenty-two or 45.5%) indicated that they would have to change existing practices to comply with the standard. Further, 59.1% of the forest managers were either undecided or non-supportive of these valuation recommendations under DP 23.

Herbohn & Herbohn (1999) considered one possible explanation for the lack of support for current market valuations. Forest enterprises operate within an already economically volatile sector. As a current market valuation approach introduces additional volatility into reported asset values, forestry organisations may not have been supportive of this valuation base. Forest managers that were not supportive of current market valuations were asked to provide an alternative measurement base. The responses were as shown in Table 2.5. Of the alternative methods proposed, 72.8% of respondents suggested either a historical cost base or a historical cost base in conjunction with another method.

A possible explanation put forward by Herbohn & Herbohn (1999) for the preference of the historical cost method was based on the political and social pressures that surround larger firms compared to smaller firms. They considered that in light of these pressures, larger firms would be subject to more scrutiny from society and individual stakeholder groups. Therefore, they would be less likely to support current

market valuations as it would have the potential to raise their profile with the introduction of volatility into financial reports. A spearman rank correlation test was conducted to test this explanation. However, no significant results were found. It was considered that a limiting factor to these results was the small number of forest managers surveyed and it was suggested that the test, be conducted again on a larger sample size.

Table 2.5
Alternative Measurement Methods

Measurement Method	Percent
Historical Cost	36.4%
Historical cost for immature trees and current cost for mature trees	27.3%
Net Present Value	27.3%
Historical cost adjusted for inflation for immature trees and current market value for mature trees	9.0%

Dowling & Godfrey (2001) examined the measurement methods of all Australian firms that undertook a main business activity that utilised SGARAs for the 1999 financial year. They conducted a survey of firm's annual reports. Their survey sample was drawn from Australia's top 500 firms in 1999. The final sample comprised thirty firms from eight separate industries. Whilst there was a large diversity of industries included in the sample, it was found that only four types of SGARAs were reported being grapevines, standing timber, livestock and crops. Although the surveyed firms only held four types of SGARAs, it was found the firms used a variety of measurement methods (five) with historical cost being the most preferred method (60% of firms surveyed). Fourteen of the thirty firms surveyed used more than one method of measurement to value their SGARAs. One of the least used measurement

methods was the net market value method (13.3%), being the method required under AASB 1037.

Dowling & Godfrey (2001) put forward two possible explanations for the limited use of the net market value method – either active or liquid markets do not exist for some SGARAs or that firms prefer not to measure SGARAs at net market value. Of the firms surveyed, three firms had already adopted AASB 1037. It was found that only one ‘early adopter’ had used the net market value method to value their timber SGARAs. Of the other two early adopters, one had used a combination of net present value and historical cost to measure timber, livestock and crops whilst the other firm used net present value and an independent valuation to measure grapevine SGARAs. They considered, that whilst this evidence provided little support for the usage of the net market value method, the numbers were small and generalisations across SGARA industries was therefore limited.

A further finding of this study was that only six of the twenty-one (28%) firms surveyed that chose measurement methods other than the historical cost method, chose to recognise valuation changes in their income statement. They considered that this finding would require major changes in how SGARA valuation adjustments are accounted for when AASB 1037 was implemented. Dowling & Godfrey (2001) suggested that a re-examination of valuation methods be undertaken once AASB 1037 became mandatory.

Whilst the results from these pre-implementation studies have highlighted the diversity in practice prior to the introduction of AASB 1037, being so few in number, it is difficult to make generalisations across the SGARA industry in Australia. Further, questions must be raised as to the motivation behind some of the conclusions

drawn in the study of Roberts *et al.* (1995) which formed Discussion Paper 23. For example, the study involved the examination of two SGARA industries within Australia and then from these results, conclusions were drawn across all industries in Australia. It cannot be assumed that all industries in Australia have the same issues and therefore can be treated the same in accounting for SGARAs, without actually investigating each industry.

There have been few studies that have examined the post-implementation effect of AASB 1037. Moodie (2000) examined the financial reports and sought comments from three firms that had accounted for SGARAs on a voluntary basis in accordance with the standard's requirements prior to its formal implementation date. It was found that there was acceptance of the standard by these early adopters. The group of firms included a small wine producer Normans Wines, plantation timber Auspine and Earth Sanctuaries. Normans Wines considered the introduction of the standard '*as generally a good thing as it would bring about more transparency*'. Auspine were '*very satisfied*' with accounting for SGARAs, having adopted the standard from 01 July 1998 with the company expecting an average annual revenue contribution of \$748 million. They considered that it provided for a more even distribution of profit throughout the life of the plantations. They further considered that the forestry industry had come to accept the standard after initial reluctance as they were all '*using the same valuation methods now and that's giving more transparency to outside investors*'. The audit firm, Howath Partners, that audits Earth Sanctuaries accounts, considered that:

‘There are a lot of people in the accounting fraternity who would be concerned about the standard in terms of its perceived lack of consistency. But if it’s applied in the right way, the standard will be consistent across particular industries and will serve as a valuable benchmarking tool’.

Hone *et al.* (2001) and Taggart (2000) examined the way in which AASB 1037 has been interpreted and applied in the case of ESL. ESL was one of the first Australian firms to apply AASB 1037, electing to apply the standard from 01 July 1998. The firm first applied the standard after concluding that their animal population was *‘being overlooked by traditional accounting methods. The animals not have a real value as far as our balance sheet and profitability was concerned’* (Taggart, 2000). In a controversial approach, ESL interpreted wildlife within their sanctuaries as SGARAs.

Hone *et al.* (2001) in their examination concluded that the interpretation by ESL management of AASB 1037 may not have been in the best interests of the firm. They considered that the cost basis that this firm had chosen in valuing these types of assets was incorrect. It provided an unreliable measure of the firm’s performance and it brought into question the relevance and reliability of the information communicated to external parties. Further, they questioned whether the profession needed to reassess the use of AASB 1037 (Raar *et al.*, 2002) in light of its application by ESL.

Booth & Walker (2003) examined the measurement methods utilised by five major and two smaller listed wine producers in Australia (no year was stated other than post implementation of AASB 1037). By conducting a financial statement survey, they found that measurement methods utilised by these firms were the net present value and the director’s valuation method.

They found that very few disclosures were provided by these firms, in that any significant assumptions underlying the calculations were not provided. They reasoned that this would make it virtually impossible for analysts to undertake comparisons of the financial performance for winemakers. They concluded that the application of the standard has resulted in false or misleading financial statements and a reduction in the presentation of relevant financial information.

Milne (2004) conducted a field study interviewing forty-five affected preparers, users, auditors and the AASB. The field study was carried out by the New Zealand Wine Company on behalf of the Delahunty Primary Industry Trust⁷ in an effort to determine the experience by Australian firms of AASB 1037 prior to implementation of a similar proposed standard (ED 90) in New Zealand. The field visits were undertaken in October 2002 and July 2003. The key findings from the interviews were that;

- There was widespread disdain for the accounting standard amongst corporate and accounting firms;
- The theoretical foundations and analytical bases of the standard were unsound;
- The qualitative characteristic requirement of the standard, namely relevance, understandability, reliability and comparability were not met.

⁷ A charitable trust based in New Zealand to provide research grants to foster primary industry accounting research

Key recommendations presented to the Delahunty Primary Industry Trust included the following:

- The temporary suspension of processes leading towards the introduction of New Zealand IAS 41 to allow participants in the ED 90 and the NZ IAS 41 'Invitation to Comment' (2004) submissions opportunity to have their concerns held;
- Amendments were urgently required to IAS 41 and/or the New Zealand IAS 41 to confine the application of the standard to consumable-SGARA entities;
- An educational program was required before any planned introduction of the New Zealand IAS 41.

Whilst stating these findings and key recommendations, there was no formal analysis of the interviews and few direct quotes. The report was a summary of the interviews with little raw data provided. Further, with the author, being one of the key directors of the New Zealand Wine Company, it is likely that the results were biased as there was strong opposition by New Zealand corporations at that time to the introduction of such an accounting standard.

Herbohn (2006) conducted a review of the financial statements of all listed Australian companies with SGARA assets for the first four years of compliance with AASB 1037. The review focused on two main issues, being the income statement effect of including changes in SGARA values and the valuation methods used to value SGARAs. These issues were identified from conducting a content analysis of the submissions to ED 83 in an effort to identify some of the initial concerns raised by constituents.

The listed firms that were chosen for the review were identified from Jobson's Online database of Australian public companies and the Connect 4 annual report database for the period 1998 – 2004. Further, any companies identified in prior studies of reporting for SGARAs by Australian firms supplemented this listing. Such studies included Booth & Walker (2003), Godfrey & Dowling (2001) and Milne (2004). A final sample of thirty-four companies was identified. The sample firms held a range of SGARA assets with the two major types being grapevine assets (held by fourteen firms) and timber (held by seven firms).

It was found that accounting for SGARAs has had a significant effect on the reported net profits of these firms since complying with AASB 1037. Aggregate annual SGARA revenues/expenses were expressed as a percentage of the net profits reported by each firm for each of the years after and including the year of compliance. It was found that the mean aggregate SGARA revenue accounted for 236% of reported net profit in the year of compliance, 89% in the year after compliance, 126% two years after compliance and 95% three years after compliance. Further, it was found that there has been volatility in the reported SGARA revenues over the four-year period for crops, timber, grapevines and livestock.

Of the sample companies, it was found that firms used a variety of methods as shown in Table 2.6, with the net present value method being the most favoured. Whilst this analysis is useful, it was limiting in that it did not examine the measurement methods sample companies utilised over the four years since implementation but rather just looked at the most recent financial statement available for each company during that period. Further, in counting the number of times particular measurement methods were utilised, where a company utilised multiple methods such as net present value

and directors' valuation techniques, only one method was counted, in this case the net present value method.

Table 2.6
Measurement of SGARAs Under AASB 1037

Measurement Method	Number	Responses %
NMV in an active & liquid market	6	17.65
NPV of expected cash flows	12	35.29
Cost	1	2.94
Independent Valuation	6	17.65
Directors Valuation	8	23.53
Insured Value	1	2.94
Total	34	100.00

It was also found that there was little consistency in the disclosure of any significant assumptions in determining the net market value – *'most companies tended towards brief, uninformative disclosures'*. Only six of the sample firms provided detailed information on the assumptions that they utilised in determining the net market value of SGARAs. This was a similar conclusion reached to that of Booth & Walker (2003) previously discussed.

Considering the interest that was caused by the introduction of this accounting standard into Australia, the number of post-implementation studies appears to be quite low. The question must be asked why? Whilst the accounting standard may be considered a minor standard by some, its effect has far reaching implications for those firms that have been affected by it. A possible explanation is that with the introduction of international accounting standards from 01 January 2005 and the many and varied

issues surrounding this and the implementation of these standards, this accounting standard and its own issues have been pushed to the foreground.

6. Summary

The introduction of AASB 1037 into the Australian accounting standard setting environment brought about a dramatic change in the way many Australian firms reported their SGARAs. Prior to its introduction, as examined in the literature there was a wide diversity of practice in relation to the measurement of SGARAs. This had led to a lack of comparability and consistency in accounting for SGARAs.

The next chapter will discuss the hypotheses used to test whether these qualitative characteristics have been and will be achieved through the introduction of AASB 1037 and the subsequent adoption of AASB 141.

CHAPTER 3 : HYPOTHESES DEVELOPMENT

1. Introduction

Hypotheses are developed in this chapter to test whether the qualitative characteristics of comparability and consistency have been achieved by the introduction of AASB 1037 (and subsequently AASB 141). These hypotheses will examine the measurement methods used by firms, the consistency of these methods over time and by SGARA type and the type of information systems used by firms to record SGARAs.

2. Overview of Hypotheses

In this study, five hypotheses are developed to test whether comparability and consistency have been achieved through the introduction of accounting for SGARAs. The first hypothesis examines the measurement methods utilised by firms in accounting for SGARAs and predicts that firms do not utilise the net market value method. Hypotheses two and three consider comparability and consistency issues by examining the consistency of measurement methods over time and by SGARA type. It is predicted that firms have applied measurement methods consistently over time and that the measurement methods chosen by firms in accounting for SGARAs are influenced by SGARA type. The fourth hypothesis examines the development of information systems by firms to account for SGARAs. It is predicted that for firms who have developed information systems that are capable of recording reliable net market valuations, they will utilise the net market value method. The final hypothesis examines the measurement methods that firms would utilise under the international standard, AASB 141 and predicts

that the active market method would not be used by firms. Each of these hypotheses will now be discussed in turn.

Measurement Method

AASB 1037 prescribes that SGARAs are to be measured at net market values (AASB 1037, paragraph 4.1, 1998). The net market value of a SGARA is defined in paragraph 10.1, as the amount, which could be expected to be received from the disposal of the SGARA in an active and liquid market after deducting costs expected to be incurred in realising the proceeds of such a disposal.

In paragraph 5.3 (AASB 1037, 1998), it is stated that where no active and liquid market for a SGARA exists, the best indicator of the net amount which could be received from the disposal of the SGARA in an active and liquid market must be used to measure the SGARA, taking into account all relevant information.

How is the best price indicator of that asset determined? The best indicator is considered to be the measure that represents the best balance between the often conflicting qualitative characteristics of relevance and reliability. To determine this, often requires the exercise of judgement, having regard to the circumstances (AASB 1037, paragraph 5.3.2, 1998).

There are a number of measurement methods that could be used as the best indicator.

They include:

- (a) The most recent net market price of the same or similar assets;
- (b) The net market value of related assets;
- (c) The net present value of cash flows expected to be generated by the SGARAs discounted at a current market-determined rate, which reflects the risks associated with those assets;
- (d) Cost.

(AASB 1037, paragraph 5.3.2 (a) – (d), 1998).

In examining studies that have been conducted prior to the implementation of AASB 1037, Herbohn *et al.* (1998) found that there was an absence of net market valuations for SGARAs, with historical cost and net present value being the preferred methods. Dowling & Godfrey (2001) in an examination of thirty firms in the 1999 year found that the net market value method was one of the least disclosed methods. Three of the thirty firms surveyed had already adopted AASB 1037. Of these three firms, only one firm had used the net market value (in combination with the historic cost method) method. They suggested that this limited use of net market value implied that either active and liquid markets did not exist for some SGARAs or that firms preferred not to measure SGARAs at net market value.

Dowling & Godfrey (2001) whilst conceding that the number of ‘early adopters’ was small and therefore generalisability was limited, suggested that when AASB 1037 became mandatory, some firms were unlikely to report SGARAs using the net market

valuation approach. Rather, the firms would use their permitted discretion under the standard to report SGARAs using the best indicator of net market value.

Studies that have been conducted since AASB 1037 implementation that have examined this issue are Booth & Walker (2003) and Herbohn (2006). Booth & Walker found that the net market value method was not utilised at all by their sample firms, being seven wine producing firms within Australia. Herbohn found that this method was utilised a total of 17.65% by their sample firms. However, this study was limiting in that where firms used multiple methods of measurement, only one method was recorded in the results.

Whilst the preferred method under AASB 1037 is the net market value method, it is anticipated that the usage of the net market value method will be minimal under AASB 1037. This may well be, as explained by Dowling & Godfrey (2001), due to the non-existence of active and liquid markets or that firms simply prefer not to use this method of measurement. Therefore the first hypothesis is formulated to ascertain whether the net market value method is used in the valuation of SGARAs.

H₁: In accounting for SGARAs under AASB 1037, firms do not use the net market value method.

Comparability Over Time

AASB 1037, paragraph 5.2.3 states that the measurement of SGARAs at net market value will permit comparisons of SGARAs having the same characteristics, regardless of their purpose, and when, by whom and how they were acquired. Comparability in financial

reporting is considered an essential feature of accounting information. As considered by Miller (1978):

‘comparability of financial information is essential if it is to be helpful in decision making’.

Kirk (1977) contended that:

‘increased comparability of the information contained in financial statements is one of the most important implications of a conceptual framework’.

Comparability is defined in SAC 3, paragraph 5¹ as that:

‘quality of financial information which exists when users of that information are able to discern and evaluate similarities in, and differences between, the nature and effects of transactions and events, at one time and over time, either when assessing aspects of a single reporting entity or of a number of reporting entities’.

Comparability implies that the measurement and display of transactions and events need to be carried out in a consistent manner throughout an entity, and over time for that entity, and in a consistent way for different entities (AASB Framework, paragraph 39, 2004). Thus, firms holding identical assets or engaging in identical activities in the same economic environment should report the same information about their assets and activities (Miller, 1978).

That is, it can be said that financial statement reporting would be comparable if all firms applied consistently the same accounting principles for a given type of event in a given

¹ No such definition was provided in the AASB Framework, which effectively replaced SAC 3 from 01 January 2005.

set of circumstances. It is important to note though, that consistency is not an end in itself to the achievement of comparable financial reporting – though it is a necessary and important condition, it is not by itself sufficient (Miller, 1978) to determine comparability. Other financial statement qualitative characteristics needed include relevance, reliability and understandability (AASB Framework, paragraph 23, 2004).

Whilst there are no known studies that have examined the consistency of measurement methods over time in accounting for SGARAs, it is anticipated that firms would have chosen a measurement method when implementing AASB 1037 that they have continued to apply consistently over time. By applying such measurement methods in a consistent manner, this would allow for comparability across firms to be achieved.

Therefore, the following hypothesis is developed to ascertain whether comparability has been achieved through firms applying SGARA measurement methods in a consistent manner.

H2: In accounting for SGARAs under AASB 1037, firms have applied measurement methods consistently over time.

Consistency By SGARA Type

Dowling & Godfrey (2001) in their findings found that the measurement methods employed by an entity were SGARA specific. They suggested that the SGARA type determined the measurement methods to be utilised. They found clear preferences between different SGARA types and particular measurement methods in the wine industry. Of the twelve firms reporting grapevine SGARAs, eight firms (66.7%) used a

valuer, either independent and/or directors' valuation. They considered that this preference was associated with there being no requirement at the time to disclose the grapevine SGARA component of vineyards separately from the land valuation.

Four of the eight firms with livestock SGARAs used the lower of cost and net realisable value. Dowling & Godfrey considered this preference was explained by the fact that livestock were often classified as inventories in the financial statements and therefore were following accounting standard requirements (AASB 1019 : Measurement and Presentation of Inventories in the Context of the Historical Cost System) to value the livestock. It was also found that there was a preference for using the net market value method when valuing crops. They considered that as crops are often pre-sold, an objective market value would have been available for these SGARAs.

Whilst no other studies have directly considered this linkage between SGARA types and particular measurement methods, on examination of previous studies, Roberts *et al.* (1995) concluded that the average cost method predominated in the measurement of livestock in a survey of current reporting practices across SGARA related industries. Further, Booth & Walker (2003) found that of the wine making companies included in their sample, all utilised the net present value and director's valuation approaches.

The following hypothesis is therefore developed from these observations to ascertain whether the methods used by firms to measure SGARAs are influenced by SGARA type. It is anticipated that such methods will be influenced by the SGARA type.

H3: The type of SGARA determines the measurement method adopted in applying AASB 1037.

Information Systems

The implementation date of AASB 1037 was originally to be operative for reporting periods ending on or after 30 June 2000. However, in July 1999 the Boards, in response to concerns from some constituents, deferred the operative date until financial years on or after 30 June 2001.

One key prominent group in the lobbying efforts of attempting to defer the operative date of AASB 1037 was the Group of 100 – being the peak body representing one hundred of Australia's largest companies. The Group raised such concerns in a submission to the AASB (dated 4/5/99). Their concerns focused on the uncertainties and difficulties in implementing the standard. They considered that additional work and time was required to deal with the practical implementation issues of the standard. They requested that the operative date be deferred to deal with such issues. A number of other key constituents also raised similar concerns at this same time in separate submissions. This concerted effort by industry led to the deferral of the standard by twelve months to on or after 30 June 2001. Dowling & Godfrey (2001) in examining their research findings considered that the decision to defer the implementation date of AASB 1037 was valid. Their findings indicated that in order to comply with AASB 1037, many firms would have to re-develop their information systems to enable adjustments to their measurement methods.

The Boards considered that the deferral of the operative date of the standard would enable entities sufficient time to develop systems required to provide reliable information about the net market value of SGARAs (AASB 1037A - Development of the Standard,

1999). Dowling & Godfrey (2001), in their examination of firms' measurement methods in the 1999 financial year, considered that a possible reason as to the limited use by firms of the net market value method may have been due to the absence of information systems capable of detecting, tracking and recording reliable net market values.

The following hypothesis is developed to determine if information systems determined the methods used by firms to measure SGARAs. It is anticipated that firms that had developed information systems that were capable of recording reliable net market valuations utilised the net market value method. For firms that did not develop such information systems, it is anticipated that they utilised methods other than the net market value method.

H4: The information system adopted by the firm determines the measurement method used to measure SGARAs.

International Adoption

AASB 141 prescribes that biological assets and agricultural produce harvested from an entity's biological assets are to be measured at fair value less estimated point-of-sale costs (AASB 141, paragraph 12, 13, 2003), except in the case where the fair value cannot be measured reliably.

The fair value of a biological asset is defined in paragraph 8 (AASB 141, 2003), as the amount which could be exchanged or a liability settled between knowledgeable, willing parties in an arm's length transaction. This method of measurement is identical to that of AASB 1037, with the exception being AASB 1037 uses the term 'net market value' and

AASB 141 uses the term 'fair value'. AASB 141 considers that where an active market exists for a biological asset, the price obtained in this market is the appropriate basis for determining the fair value of an asset (2003, paragraph 17). Therefore, the terms 'net market value' and 'active market' are considered to have the same meanings under the two accounting standards.

Where no active market exists, an entity is given the option of using one or more of the following market methods to determine fair value:

- The most recent market transaction price;
- Prices for similar assets with adjustment to reflect differences, and;
- Sector benchmarks (AASB 141, paragraph 18, 2003).

Where market-determined prices are not available, an entity can use any of the following methods:

- The present value of expected cash flows from the asset discounted at a current market-determined pre-tax rate;
- Cost

(AASB 141, paragraph 20, 24, 2003).

What is the anticipated impact of this change to AASB 141 for firms? Will firms value biological assets differently under AASB 141? In ED 114/IAS 41 'Agriculture' Summary (2003), the AASB considered that the effect on general reporting in the public sector would only impact upon agencies with substantial agricultural activity. The AASB

provide an example, 'Forest Products Commission' but provide no further explanation and do not attempt to consider the impact on the private sector.

It is anticipated that the usage of the active market method will be minimal under AASB 141. This is based on similar reasoning as considered under Hypothesis one and the usage of the net market value method. That is, as considered by Dowling & Godfrey (2001), the usage of this method would be minimal due to the non-existence of active and liquid markets or firms simply prefer not to use this method of measurement. As the net market value and the active market value are considered to have the same meaning, it would be reasonable to expect that under AASB 141, minimal usage would continue. The fifth hypothesis, therefore is formulated to ascertain whether the active market method is used in the valuation of biological assets.

H₅ : In accounting for biological assets under AASB 141, firms will not utilise the active market method.

3. Summary

Under AASB 1037 the measurement of SGARAs at net market value will permit comparisons of SGARAs having substantially the same characteristics, regardless of their purpose, and when, by whom and how they were acquired (AASB 1037, paragraph 5.2.3, 1998). Further, paragraph 5.2.4 states that these measures will provide more consistent measurement between entities and between SGARAs of the same entity. This study predicts that firms do not utilise the net market value measurement method.

However, in predicting that the net market value is not used, can the comparability and consistency criterion of this standard still be accomplished? This study considers that these criterion can still be met in a limited way by predicting that the methods employed by firms have been applied on a consistent basis over time. It is further predicted that firms do not consistently apply methods between SGARAs of the same entity but rather methods are influenced by SGARA type and by the information system that are employed to measure SGARAs. With the adoption of the Australian equivalent of IAS 41, AASB 141, from 01 January 2005, this study examines the anticipated measurement methods that firms expect to utilise. It predicts that firms will not utilise the active market method in valuing biological assets.

The methodology to be adopted in testing these hypotheses will be discussed in the next chapter.

CHAPTER 4 : METHODOLOGY

1. Introduction

In this chapter the approach taken to the selection of the sample and the utilisation of the research methods used are discussed. This study adopts a triangulated approach incorporating both mail surveys and interviews to collect data.

2. Choosing a Research Method

2.1 Introduction

This study adopts both quantitative and qualitative methods. This approach is known as ‘triangulation’ and has been recommended by researchers for many years as it allows for a more complete picture to be shown as it can uncover unique variances which otherwise may have been neglected by the use of a single research method (Webb *et al.*, 1966; Smith, 1975; Denzin & Lincoln, 1998; Jick, 1979).

2.2 Research Methods Utilised

A mail survey and interviews were adopted. Initially a mail survey was sent to the selected respondents; and a follow up interview of a smaller number of respondents was undertaken.

Through the use of these two methods, it allowed for an analysis across a broad cross-section of firms utilising quantitative techniques and an in-depth analysis of two firms utilising qualitative techniques.

2.3 *Justification of Research Methods Utilised*

There are many practical advantages of using the mail survey. Two such advantages include the saving of both time and costs (Nachmias & Nachmias, 1981) which was found to be true in relation to this research project. The mail survey allowed for the collection of data at low cost and in a speedy manner which then allowed analysis to be conducted. The analysis then determined the areas where a more in-depth analysis would be beneficial as was undertaken in the second stage of this project, being the interview stage.

One of the major problems that can arise using mail surveys is that of low response rates (de Vaus, 1991). In an effort to raise the response rate, the covering letter was written with the intention to convince the respondents of the study's significance by explaining the study's anticipated contribution to the ongoing debate on SGARAs. This letter was read by a number of colleagues and friends to improve the readability and to confirm that the importance of the research came through. Two follow-up letters and identical surveys were also used in an effort to increase the response rate.

The interview stage was intended to complement and provide further analytical review of the mail survey. It was anticipated that the interviews would provide valuable data on how the interviewees have handled the introduction of an accounting standard, both at a domestic and international level, and the effect that these standards have had on each interviewee's firm. It would also allow for the follow-up and analysis of any highlighted issues that were revealed through the mail survey by seeking clarification, where required from the interviewee subjects.

In the next section, the sample chosen for this study is discussed.

3. Industry

The reporting of SGARA assets affects a number of industries within Australia. It was decided to confine the study to two main industries within Australia. The two industries that were chosen were the winery and grapevine industry (the wine industry) and the forestry and timber industry (the forestry industry)¹.

In an examination of the submissions received from ED 83, these two industries were considered quite active in their opposition to the introduction of a SGARA standard. In examining the forty-six responses from ED 83, a large proportion of the submissions received were from these two industries in relation to the total responses from industry groups. Of the total responses received, twenty-two responses were received from agricultural firms. 72.72% (sixteen responses) of this total were received from firms within the wine or forestry industry. The remaining responses (six responses) were received from firms in the livestock, orchard and cotton industries.

The negative feelings of these two industry groups toward the imposition of an accounting standard in this area are clearly expressed in parts of their submission. For example;

- *'... we do not support the exposure draft on grounds of both principal and practical application ...'* BRL Hardy Limited

¹ The process of selecting the mail survey recipients in these two industries is discussed in Section 4.

- *‘... strongly recommends that the Board re-examines the concept of applying net market value to these assets ...’ Southcorp Limited*
- *‘...The proposed standard’s failure to adequately address the issue of valuation will result in a variety of valuation methods continuing to be used to value forestry SGARAs. The objective of promoting comparability will not have been achieved ...’ ACT Forests*
- *‘... The ability to determine the net market value of SGARAs such as plantations and other forestry assets is considerably more subjective and potentially more volatile than the majority of other SGARAs ...’ Amcor Limited (AASB - Exposure Draft 83: Submissions File, 1998).*

Since ED 83, these two industries have continued to voice their opposition and have been relentless in attempting to bring to the AASB’s and the public’s attention the issues and problems that the move to accounting for SGARAs has caused. They remain at the forefront opposing the standard today. For example, Fosters Group Limited, in responding to the international Exposure Draft 114 (Exposure Draft 114 : Submissions File, 2003) requested that the wine industry be excluded from any future standard requirements. Based on four year’s experience with meeting the reporting requirements of AASB 1037, Fosters considered that the accounting requirements and valuation concepts of AASB 1037 when applied to the wine industry were too onerous for the average user.

This study will address this issue in relation to the two industries of wine and forestry. In the next section the development of the mail survey instrument is discussed.

4. Mail Survey

The survey recipients were selected in two stages.

4.1 Mail Survey Subjects

In stage one, firms were targeted that are required to comply with the requirements of AASB 1037/ AAS 35. Listed Australian public companies are required to comply with AASB standards. Information was sought from the Australian Stock Exchange (ASX) web-site as this contains all Australian listed public companies. To identify relevant companies for this study, details of companies under the GICS industry grouping of 'Food, Beverage and Tobacco' and 'Materials' were obtained. This provided a listing of 55 and 408 public companies respectively. Each of these companies was then examined to determine their principal activity, as provided to the ASX. Those companies that were found to have a principal business activity of 'wine production' and/or 'forestry' were included in the sample selection. The forestry industry includes a number of state public authorities which are required to comply with the AAS 35 requirements. These firms were included in the sample selection as a major part of the industry group. This provided a total population of 35 firms, split into 19 wine and 16 forestry companies.

In stage two, firms within the two industries were targeted that were not required to comply with AASB 1037/AAS 35 requirements. AASB standards apply to listed Australian public companies whilst AAS standards apply to public entities. There are many firms within Australia that do not fit into either of these two categories. Whilst these firms are not required to comply with the standards, many firms in Australia still do due to the professional obligations imposed on accountants in preparing the financial statements for these firms. It was thought that by extending the study to include these firms, the results may provide particular insights into how these firms

accounted for SGARAs and give interesting cross-sectional results about the two industries.

A listing of all Australian business names for the industries of forestry and wine growing was obtained from the Australia On Line CD_ROM (2003). This lists businesses by name and contact details, industry sector and demographic location.

The CD_ROM listed a total of 293 businesses for the forestry industry and 1832 businesses for the wine growing industry. Each of these business listings was then examined and business's that were found not to be applicable to this study (e.g. consultants, firms that were listed more than once, firms that were already included in the sample) were removed. This provided with a final listing of 234 firms in the forestry industry and 1489 firms in the wine industry.

To help provide guidance as to an appropriate sample size, previous research conducted in this area was examined. Sample sizes ranged from 77 (Herbohn & Herbohn (1999)) to 120 for the post-implementation review of AASB 1037/AAS 35 in 2003. To remain consistent with these previous studies, a total of 110 firms were chosen from the listing. The firms were chosen by random sample as this method was considered the most appropriate as each firm has the same probability of being included in the sample selection and therefore would be most representative of the population (Alreck & Settle, 1985).

4.2 Resulting Sample Size

A total sample size of 145 was chosen for this study. This was made up of 35 firms from stage one and 110 firms from stage two of the sample selection process.

4.3 *Preparation of Survey Instrument*

At the initial stages of the development of the mail survey, the appearance and quality of the survey was carefully considered as this could have an impact on response rates. It was decided to print the survey on A4 singled-sided paper using black ink on a laser printer. It was stapled in the upper, left corner and folded once and placed in an A4 envelope. The colour of the paper chosen was cream for the initial and second mail-outs, to make the survey appear more attractive (Warwick & Luninger, 1975). For the third and final mail-out, a bright yellow colour was chosen to ensure that the survey stood out in an effort to increase response rates. The choice in colour for this mail-out was based on a study by Hartley & Rutherford (2003) that investigated response rates for coloured paper. They found that whilst there was no significant differences between white paper and coloured paper in general, when the most common colours used were separately examined, yellow paper gave the highest percentage of returns.

4.4 *Survey Questions*

The survey was designed to gather data to test the five hypotheses that were developed in this study. There were twenty-three questions² in the survey. Two of the questions were open-ended and required written responses. The open-ended questions were designed to encourage self-expression. Two of the questions required a scaled response, six questions required a yes/no response, seven questions required a multiple choice response, four questions required the subjects to respond by using a key and two questions required a one word response.

² Refer Appendix Two for detail.

4.5 *Pilot Testing*

A preliminary version of the survey was pilot tested before the formal mail out stage. The purpose of the pilot testing stage was to identify any unforeseen problems in question wording or question sequencing. It was also used to indicate the need for additional questions or the elimination of unnecessary questions. The pilot test was conducted in two stages. Stage one involved pre-testing a preliminary version of the survey on three lecturers within the School of Accounting and Corporate Governance and one lecturer within the School of Management at the University of Tasmania, and two peers. The aim of this stage was to ensure that any obvious problems such as formatting problems or readability of the questions were identified and required revisions or amendments were made before the formal pilot test.

The second stage, being the formal pilot test involved one firm from the forestry industry and one firm from the wine industry who were not included in the final sample surveyed. The two firms were contacted initially and both agreed to participate in the pilot test stage. The firms were asked to complete the survey and then asked a set of questions specifically about the survey itself. The resultant pilot test results were analysed and any necessary changes were made to the survey. No major changes were detected in the pilot survey.

4.6 *Mail Out of the Survey*

Included in the mail out of the survey were two reply-paid envelopes, a covering letter explaining the purpose of the research project, and a guarantee of confidentiality to encourage participants to complete and return the survey. To further encourage participation, participants were offered a summary of the results when completed. To obtain the summary, participants were asked to complete a separate sheet attached to

the survey and place it in the smaller of the two reply-paid envelopes. This would ensure that respondents' answers were anonymous and would not be able to be identified.

To provide an effective response rate, and to increase survey response rates, two subsequent mailings followed the initial mailing as this was considered the most efficient (Babbie, 1998) approach. It is generally considered that follow-up letters can increase response rates, with response rates increasing in some case up to 30% (Chiu & Brennan, 1990).

It is further considered that two to three weeks is a reasonable time frame between mailings (Babbie, 1998). Thus, the mail-outs were timed with a space of approximately three weeks between each.

4.7 Receipt of Surveys

As completed surveys were received, each survey was opened, date stamped and consecutively numbered. Each survey was then examined to ensure that it was acceptable for processing. The completed surveys were subsequently sorted and coded manually.

A preliminary code structure had been developed during the pilot stage of the survey design in an attempt to highlight and eliminate any possible coding issues early on in the process. This code structure was used to code the surveys manually. By manually coding each survey, this allowed for the inputting of the data into a computer spreadsheet to be straightforward and less time consuming.

4.8 Response Rates

A total of 145 surveys were mailed out. Surveys that were not delivered due to incorrect addresses, or the business had closed operations or where the business had responded stating that the survey was not applicable to their operations were omitted. This provided a net sample of 120. A total of 40 responses were returned which provided an overall response rate of 33.33%.

Two responses were eliminated as they related to different industry groupings other than the forestry or wine industry. Further, as one response was only partially completed, it was also eliminated from the sample. The final sample for this study was therefore 37 useable responses equating to a useable response rate of 30.83%. This response rate was consistent with previous studies conducted in this area of research, ranging from 23.85% for the post implementation review of AASB 1037/AAS 35 to 31% (Herbohn & Herbohn, 1999).

4.9 Non-Response Bias

The non-response rate for this survey was 66.67%. That is, of the 145 survey that were mailed out, 66.67% of all potential respondents did not respond. A possible explanation for this rate was that included in the sample were those firms that were not required to comply with AASB 1037. Some of these firms may have had no interest in the subject matter, and therefore did not respond. This explanation concurred with a study conducted by Oppenheim (1966) who considered that similar levels of non-response rates are typical in samples for respondents who may have no special interest in the subject.

Non-response in surveys may introduce bias as the actual returns may not be representative of the population. To determine if bias had been introduced into this study, a method developed by Oppenheim (1966) was utilised. Using this method, the survey results of respondents who sent their surveys in on time were compared with the survey results of late respondents. Oppenheim found that respondents who sent in their surveys late are similar to non-respondents. Where there was no bias and thus, the results were representative of the population, it would be expected that the survey results would be similar between the respondents who sent their surveys in on time and the late respondents.

To compare survey results between the two types of respondents, the mean response scores for respondents that sent in their surveys on time were compared with respondents who sent their surveys in late. It was assumed that where no bias existed, the mean response scores would be similar.

There were twenty-six survey responses received by the due date and eleven responses received late. Mean response scores were obtained for each question. The eleven responses received late were then compared with the twenty-six mean response scores received before the deadline by conducting a Mann-Whitney test to identify any possible differences. The differences were not significant at the 0.05 level for all questions apart from question twenty-one. This question asked respondents if their firm had considered how IAS 41 will affect the accounting treatment of SGARAs. On further analysis, it was found that there were a proportionally higher number of late respondents that had considered the effect of AASB 141 compared to the respondents that had submitted the survey on time. A possible explanation for this difference is that the respondents who had submitted their surveys late, had taken more time to

consider the effect of AASB 141 than those respondents that had submitted on time. This would explain the difference in the test results for this question. Table 4.1 provides the results of the test for response bias.

Table 4.1

Response Bias Results

Mann-Whitney Test for Non-Response Bias by Comparing Late Respondents with On-Time Respondents

	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q14	Q16	Q17	Q18	Q19	Q19b	Q20	Q21	Q22
Mann-Whitney	131	134	102	122	127	97.5	126	81.5	48	97	114	19.5	32.5	38.5	27	141	31.5	17
Wilcoxon W	186	189	157	500	182	398	181	313	201	152	492	25.5	53.5	66.5	42	492	59.5	32
Sig. (2 tailed)	0.88	0.97	0.19	0.64	0.74	0.34	0.71	0.52	0.18	0.13	0.41	0.83	0.74	1.00	0.95	0.92	0.03	0.90

4.10 Results Testing

Non-parametric tests were conducted on the mail survey results, with the main test being the chi-square goodness-of-fit test. The test was used to determine whether or not the actual results were distributed the way that they were expected by testing the 'goodness-of-fit' of the observed distribution with the expected distribution (Hair *et al.*, 2003). In relation to this project, the tests examined whether a significant difference existed between the actual results in the mail survey and the results that were expected, as predicted from the hypotheses.

It is recommended under this form of testing that any expected number of observations cannot be less than one to ensure rigorous testing of results (Siegel & Castellan, 1988). To ensure that these basic assumptions underlying the chi-square test were not violated, where necessary, certain minimum requirements had to be made with the expected results.

An example of this is found in conducting the test that examined the expected number of times the net market value method was utilised in comparison to all other measurement methods that was utilised by mail survey respondents (Table 5.8). Whilst it was expected that no respondents would utilise the net market value method, the expected number of respondents had to be one to satisfy the basic assumptions.

The following section discusses the questions that were used within the mail survey to assist in responding to the hypotheses posed.

5. Hypotheses Testing

The first hypothesis sought to assess whether firms had adopted the net market value method. As a result of previous research conducted by Dowling & Godfrey (2001), it was felt that firms may have chosen not to adopt the requirements of the standard due to the non-existence of active and liquid markets or that firms simply prefer not to use this method of measurement.

H1: In accounting for SGARAs under AASB 1037, firms do not use the net market value method.

To test this hypothesis, the responses to questions eight, nine and ten in the mail survey were analysed³. These questions were as follows:

- Identify the main categories of SGARAs that your firm holds (question eight);
- What are the current methods of measurement for the SGARAs, identified in question 8? (question nine);
- If any of the current methods of measurement are not the net market value in an active and liquid market method, why is this? (question ten).

The second hypothesis sought to investigate whether firms adopted a consistent approach in applying the measurement methods required to measure SGARAs. This is an important consideration for comparability, and one of the reasons provided for the introduction of such an accounting standard.

³ Refer Appendix Two for the survey.

H2: In accounting for SGARAs under AASB 1037, firms have applied measurement methods consistently over time.

It is anticipated that firms would have chosen a measurement method when implementing AASB 1037 that they have continued to apply consistently.

To test this hypothesis, the responses to questions eleven, twelve and thirteen were analysed. These questions were as follows;

- Are these the same methods of measurement been applied since the standard was introduced? (question eleven);
- For firms that change measurement methods;
 - What were the methods of measurement previously applied to these SGARAs? (question twelve);
 - Why did your firm change measurement methods after adoption of this standard? (question thirteen).

In the third hypothesis the question is pursued as to whether firms believe certain measurement methods are more appropriate for particular types of SGARA than others. It may be that the net market value method is not the preferred or best approach in all cases.

H3: The type of SGARA determines the measurement method adopted in applying AASB 1037.

It is anticipated that such methods will be influenced by the type of SGARA as was found in previous studies findings of Dowling & Godfrey (2001), Roberts *et al.* (1995) and Booth & Walker (2003).

The questions in the mail survey that relate to hypothesis three are questions six, seven, eight and nine. These questions were as follows;

- Indicate how important the following SGARA types are to your firm (from least important to most important);
 - Fish
 - Grapevines
 - Livestock
 - Orchards
 - Timber
 - Other – please specify (question six);
- Does the type of SGARA influence the measurement method chosen by your firm? (question seven);
- Identify the main categories of SGARAs that your firm holds (question eight);
- What are the current methods of measurement for the SGARAs identified in question 8? (question nine).

The fourth hypothesis explores whether the information systems adopted by firms influences their choice of SGARA measurement. It is believed that firms that have not adopted the net market value method may be utilising information systems that are not capable of detecting, tracking and recording reliable net market values. This was based on a previous study by Dowling & Godfrey (2001) as an explanation as to the limited usage of the net market value method.

H4: The information system adopted by the firm determines the measurement method used to measure SGARAs.

It is predicted for firms who have developed information systems that are capable of recording reliable net market valuations, they utilise the net market value method. Whilst for firms that did not develop such information systems, they utilise methods other than the net market value method.

The fourth hypothesis was tested by analysing the respondents' responses to four questions about the information systems employed in their firms, being questions sixteen, seventeen, eighteen and nineteen. These questions were as follows;

- Did your firm develop systems capable of measuring net market value by the implementation date? (question sixteen);
- Have the systems produced reliable information about the net market value of SGARAs? (question seventeen);
- Why did you firms choose not to develop such systems? (question eighteen);

- Since implementation date, has your firm produced a system capable of measuring net market value in an active and liquid market? If you answer no to this question, why not? Please explain (question nineteen).

The final hypothesis seeks to question the measurement approach that firms will adopt for measurement under the international standard, and whether they intend to move towards the net market measurement approach if they currently do not.

H5: In accounting for biological assets under AASB 141, firms will not utilise the active market method.

The final hypothesis examines the measurement methods that firms would utilise under the international standard, AASB 141 and predicts that the active market method would not be used by firms. This is based on similar reasoning as hypothesis one in that, as considered by Dowling & Godfrey (2001), active and liquid markets are non-existent or firms simply choose not to use this method of measurement.

To test this hypothesis, respondents were asked three questions in relation to the basis of measurement under the international accounting standard, AASB 141, being questions twenty, twenty-one and twenty-two. These questions were as follows;

- Is your firm aware of IAS 41? (question twenty);
- Has your firm considered how IAS 41 will affect the accounting treatment of SGARAs? (question twenty-one);
- What basis of determining fair value would your firm expect to use under IAS 41 to measure SGARAs? (question twenty-two).

Finally, to complete the survey an opportunity is provided to respondents to provide any comments that they wished to make in relation to the general subject matter of SGARAs. This question allowed respondents to provide additional information or to clarify ambiguous answers.

To provide additional insight into accounting for SGARAs, interviews were conducted. The process undertaken in planning and undertaking the interviews will now be examined.

6. Interviews

6.1 Interview Subjects/Sample

Interview subjects were chosen from stage one of the mail survey sample. This decision was made for two reasons. One being that there were a limited number of firms that are required to comply with AASB 1037 and all of these firms were in the mail survey sample. The second reason was that it would allow for greater probing and analysis of issues that were highlighted and raised from the mail survey to which the interview subjects responded.

From the stage one grouping of the mail survey sample (that is, firms that are required to comply with AASB 1037 requirements) one firm from each industry was chosen. It was decided to choose one firm from each industry as this was expected to provide a good cross-section of results.

The interview subjects were chosen by utilising purposeful sampling. This form of sampling selects information-rich cases for study in depth which more can be learnt

from rather than selecting by random selection (Patton, 1990). There are several different strategies available for selecting cases under purposeful sampling. This project utilised maximum variation sampling. This particular strategy provides two kinds of findings - high-quality, detailed descriptions of each case and important shared patterns that cut across the cases (Patton, 1990). This was important as detailed descriptions of how each firm accounted for SGARAs was required for this study but also where patterns existed, these needed to be highlighted so that the similarities and differences across industries could be discussed further.

6.2 Gaining access to Interview Subjects

How access is gained to potential participants is very important, as it is the first point of contact between the interviewer and the participant. Initial contact was made to selected participants to determine their willingness in participating in the interview process. Firms that were interested in participating were then sent a letter explaining the purpose of the research project seeking their assistance. A consent form was also provided to set out the study procedures, the risks, the rights to review and withdrawal from the process and a guarantee of confidentiality. The interview subjects were required to sign a consent form prior to interviews being undertaken.

Once consent forms were returned signed, telephone contact was made to arrange a suitable time for the interviews. Both interviews were conducted at the participant's business premises to assist in making the interview subjects feel at ease and to make participation most convenient for them. The interviews were of a 45 minute – 1 hour duration.

6.3 *Pilot Testing*

A preliminary version of the interview questions was pilot tested before the formal interview process began. The purpose of the pilot testing stage was to identify any unforeseen problems in question wording or question sequencing. The pilot test was conducted with one lecturer within the School of Accounting and Corporate Governance at the University of Tasmania and one peer. The resultant pilot test results were analysed. As a result of the pilot tests, three changes were made to the sequencing of questions. One question was eliminated since it was felt not necessary to the responses sought and two additional questions were included that provided specific information about the consistency and comparability in implementing AASB 141⁴.

6.4 *Type of Interview*

Interviews were conducted utilising a standardised open-ended interview technique (Patton, 1990) but with a variation. The standardised open-ended form of interviewing consists of a set of questions with the intention of taking each participant through the same sequence and asking each participant with essentially the same words to ensure variation in questions was minimised. This form of interviewing was chosen but with it, where the participants raised issues or points of interest, these points were explored and discussed further.

⁴ Refer Appendix Three, questions 24 and 25.

6.5 *Interview Questions*

The interview questions were separated into two main components. The first component, which took approximately half the interview time covered questions that re-examined the mail survey and any resultant issues that had come from its results. The second component of the interview which took the remainder of the interview time covered questions in relation to the newly adopted standard, AASB 141.

At a minimum, each participant was asked twenty-five questions. These questions were made up of eleven base questions that were asked in the first component of the interview and fourteen base questions that were asked in the second component of the interview⁵.

6.6 *Interview Material*

All interviews were tape-recorded and then transcribed from the tapes by an independent person. This ensured that the original data was preserved and if there was anything not clear in the transcripts, the tape recordings could be checked for accuracy. The transcripts were checked against the tapes by two people. They were then forwarded to the participants to ensure that they agreed that the transcripts were a true and accurate record of the interviews. No major changes were noted.

The transcripts were then re-organised in such a way that that were separated into the different research questions that were asked from each respondent. This allowed for a much clearer analyses of the results from the two interviews.

⁵ Refer Appendix Three for list of interview questions.

7. Summary

The adoption of a triangulated approach in this study allowed for both a broad cross-sectional analysis through the use of mail surveys but also an in-depth analysis through the use of interviews. It has provided for a more complete picture to be developed of the study.

The next chapter provides a descriptive analysis of the survey responses, an overview of the interview stage, and the analysis in relation to each of the research questions in relation to AASB 1037.

CHAPTER 5 : DATA ANALYSIS AND RESULTS – AASB 1037

1. Introduction

The results of the mail survey and interviews are discussed in this chapter. The discussion is divided into three main sections. The first section provides a descriptive analysis of the responses to the survey. The second provides a descriptive overview of the interview stage and finally, the third section provides the analysis that was conducted in relation to each of the research questions concerning AASB 1037.

2. Descriptive Survey Data

2.1 Introduction

The descriptive data embracing the mail survey is discussed to develop a profile of respondent firms. Such data includes the type of firm and the value of the firms' SGARAs.

2.2 Respondents to the Survey

The mail survey was sent to a total of 145 potential respondents. A final sample of thirty-seven useable¹ responses resulted. Of the thirty-seven respondents, twenty-three firms were from the wine industry whilst fourteen firms were from the forestry industry.

An analysis was conducted of the survey responses to identify the role that the respondent performed in the company. The majority were completed by senior officers within the company. Of the total responses, 35.1% of the surveys were completed by the finance manager/director (thirteen responses), 32.4% by the firm's

¹ Refer Chapter 4, section 4.8 for details on response rates.

accountant or auditor (twelve respondents) and 13.5% by the chief financial officer (five respondents). The remainder were completed by the company secretary (8.1%), principal/owner and agricultural labourers/farmers (5.4% each respectively).

2.3 Firms Surveyed

An analysis was conducted of the type of firms that responded to the survey. As shown in Table 5.1, there were six different groups of firms surveyed. The major types of firms included unlisted companies which comprised 48.65% of all respondent firms, 29.73% were listed companies and 10.81% were government entities.

Table 5.1
Mail Survey - Type of Firm That Responded

Structure of Firm Surveyed	Number	Percent
Listed Company	11	29.73
Unlisted Company	18	48.65
Trust	2	5.41
Sole Proprietorship	1	2.70
Government	4	10.81
Other	1	2.70
Total	37	100

The next stage was to identify those categories of firms that were least likely to respond. The three categories of potential respondents were compared to the actual firms in each category that responded. The results are shown in Table 5.2. The results indicate that a larger percentage of firms responded from the listed company and government categories. Both of these categories are required to comply with AASB

1037 whilst the other category contained firms that were not required to comply with the accounting standard. A possible explanation for this difference is that there may have been more understanding and interest from these firms compared to those firms that were not required to comply with the standard.

Table 5.2
Mail Survey - Category of Firm That Responded

Category of Firm Surveyed	Number	Actual Respondents	Percent Responded
Listed Company	27	11	40.74
Government	8	4	50.00
Other	110	22	20.00
Total	145	37	

2.4 Firms Surveyed by Industry

By categorising the business types by industry, it was determined that firms in the wine industry returned a noticeably larger number of responses for listed companies and unlisted companies in comparison to the forestry industry as shown in Table 5.3.

Table 5.3**Mail Survey - Business Structure of Firm Surveyed Categorised by Industry**

Structure of Firm Surveyed	Wine Industry	Forest Industry
Listed Company	7	4
Unlisted Company	12	6
Trust	2	-
Sole Proprietorship	1	-
Government	-	4
Other	1	-
Total	23	14

2.5 Value of Respondent Firms' SGARAs

In the survey, respondents were asked to provide the dollar value of their firm's SGARAs by ticking one of four boxes, as detailed in Table 5.4. Of the responses, 62.26% comprised firms with SGARA values of over \$2,000,000. By categorising by industry, of the twenty-three firms with SGARA values over \$2,000,000, the number of firms was quite evenly distributed between the wine industry and the forest industry, being eleven firms and twelve firms respectively. For firms with a SGARA value of \$2,000,000 or less, twelve of the fourteen firms that responded (equating to 90%) were from the wine industry.

Table 5.4
Mail Survey - Value of Respondents SGARAs

SGARA Values	Number	%	Number - Wine Industry	Number - Forestry Industry
Less than \$50,000	5	13.51	4	1
\$50,000-\$500,000	2	5.41	2	-
\$500,001-\$2,000,000	7	18.92	6	1
Over \$2,000,000	23	62.16	11	12
Total	37	100	23	14

2.6 Application of the Standard

Respondents were asked to provide detail about the financial year in which they first commenced applying AASB 1037. The results are provided in Table 5.5. In the financial year 2001, 40.54% of firms first complied with the standard. This was understandable as the standard was required to be applied for reporting periods that ended on or after 30 June 2001. A total of 96% of respondents that were required to comply with the standard had commenced applying the standard by this critical date.

One firm did not commence applying the standard until the financial year 2002. On further analysis, it was revealed that this firm had only acquired SGARAs in the 2002 year. The data was then further analysed by industry category, as shown in Table 5.5. The percentage of respondent wine and forestry firms that had first applied the standard in the years 2000 and 2001 were very similar, with a difference more evident in the 1999 year (wine industry 4.17%, forestry industry 21.42%).

A possible explanation for this difference is that the forestry industry was already reporting SGARAs in some form in their financial statements prior to the introduction of formal reporting requirements under AASB 1037. As a result, the change to the new reporting requirements may have been less onerous for firms within the industry, and therefore they applied the standard earlier.

Table 5.5

Mail Survey - Financial Year in Which Respondents First Applied AASB 1037

Year	Number	%	Wine Industry %	Forestry Industry %
1999	4	10.81	4.17	21.42
2000	5	13.51	12.50	14.29
2001	15	40.54	41.66	42.86
2002	1	2.70	4.17	-
Sub-Total (Required to apply the standard)	25			
Not yet applied the standard	12	32.44	37.50	21.43
Total	37	100	100	100

As shown in Table 5.5, there were a large number of respondent firms that had not yet applied the standard. A total of twelve respondents had not applied the standard, which equated to 37.50% of the wine industry respondents (nine respondents) and 21.43% of the forestry industry respondents (three respondents). However, of these twelve respondents, eleven of the firms were not required to comply with the standard as they were unlisted. The remaining firm was a listed company but was a New Zealand company not subject to Australian accounting standards.

2.7 *Major SGARA Types*

Firms identified their major SGARA types as being grapevines, timber and other. A number of firms had more than one SGARA type that they considered most important, which provided for a total of forty-one most important SGARA assets. Twenty-four respondents (58.5%) indicated that grapevines were most important, fifteen respondents (36.6%) indicated that timber was most important and two respondents (4.9%) indicated SGARA types other than grapevine or timber was of most importance to them. These two 'other SGARA types' respondents both indicated that the SGARA type 'orchard' was of equal importance to one other SGARA type that they held – one being grapevines and the other timber.

In the following section, an overview of the interview phase will be discussed. This was the second phase in the data collection process.

3. **Descriptive Interview Data**

3.1 *Introduction*

Senior managers in two firms were interviewed. In the interests of anonymity the two firms are to be described as Corporation A and Corporation B. Both firms were required to comply with AASB 1037 requirements. Corporation A was in the forestry industry and Corporation B in the wine industry. The chief financial officer was interviewed from Corporation A and the group financial controller from Corporation B.

To gain a more complete understanding of each corporation documentary data was used as a secondary source. Sources of this data included the annual reports from Corporation A and Corporation B for the years 2001-2005 inclusive.

3.2 *Interviews*

A standardised open-ended interview technique was adopted to ensure that consistency in questions between the two interviews was maintained. This allowed for comparison of answers between the two interview respondents. The questions that were asked in the interview followed a pre-determined plan with a set number of questions in sequential order. However, variation was allowed during the interview process to explore issues raised by participants.

The interview questions were undertaken in two stages. The first stage asked questions that re-examined the five hypotheses from this study. The second stage of the interview asked questions that explored the implementation of AASB 141 and issues surrounding accounting for SGARAs such as the process undertaken to implement AASB 141 and the importance of having an international accounting standard. The interviewees were also asked to consider in their opinion had consistency and/or comparability been achieved through the implementation of such an accounting standard. Further, the recipients were asked to consider what changes would be desirable in a future revised standard.

In the next section, the responses of the mail survey respondents and the interviewees to the five research questions surrounding the first objective of this study are discussed. The responses will be examined and discussed collectively for each research question.

4. Analyses

In this section, the responses from the mail survey and the interviews for each of the research questions that related to AASB 1037 will be discussed.

4.1 What Measurement Methods are Used by Firms in Accounting for SGARAs under AASB 1037?

The first question sought to examine and explain the valuation methods used by respondents. It was expected that firms do not use the net market value in an active and liquid market method in accounting for AASB 1037 due to the non-existence of such markets or that firms simply prefer not to use this method (Dowling & Godfrey, 2001). If firms do not use this method, this would have a likely impact on the ability of the accounting standard to bring about consistency and comparability in financial reporting.

Under this question, a number of issues are explored.

4.1.1 *Mail Survey Responses*

Respondents indicated that there were forty-one major SGARA assets, These assets comprised three types of assets being grapevines, timber and other². Of the forty-one, thirty-seven (82.2%) SGARA assets were measured using a single measurement method. Four SGARA assets were measured using more than one method (17.8%) of which two SGARA assets were grapevine and two were timber. To indicate the extent of some firm's valuation methods, one firm used a combination of five different measurement methods to value one SGARA. In total, this provided a total of fifty-five measurement methods being utilised to value the forty-one SGARA assets.

² Two firms indicated that they held 'orchard' SGARA assets.

These measurement methods are shown in Table 5.6. The main methods utilised included the net market value method (eight respondents or 14.55% of total), net present value (nineteen respondents or 34.55% of total), and the cost method (fourteen respondents or 25.45% of total).

Table 5.6
Mail Survey - Measurement Methods
(Including Adopters and Non-Adopters of AASB 1037)

Measurement Method	Number	Responses %
NMV in an active & liquid market	8	14.55
Most recent NMV for same or similar assets	1	1.82
NMV of related assets	4	7.27
NPV of expected cash flows	19	34.55
Cost	14	25.45
Independent Valuation	4	7.27
Directors Valuation	5	9.09
Total	55	100.00

This total of fifty-five measurement methods in Table 5.6 though included those firms that had not yet applied the accounting standard. As the research question was examining the application of AASB 1037, those firms that had not adopted the standard were eliminated from the analysis. Firms that had not adopted the standard are separately discussed under Section 4.1.1.3. On removal of these firms, the total number of measurement methods was reduced to forty-one as shown in Table 5.7.

Table 5.7
Mail Survey - Measurement Methods
(With Firms That Have Not Yet Adopted AASB 1037 Excluded)

Measurement Method	Number	%
NMV in an active & liquid market	6	14.63
Most recent NMV for same or similar assets	1	2.43
NMV of related assets	4	9.76
NPV of expected cash flows	18	43.90
Cost	5	12.20
Independent Valuation	4	9.76
Directors Valuation	3	7.32
Total	41	100.00

With those firms that had not yet applied the standard now removed, the main method utilised was the net present value (eighteen respondents or 43.90% of total) method. The next main method was the net market value method (six respondents or 14.63% of total).

A chi-square goodness-of-fit test was conducted. This test was used to examine whether a significant difference existed between the measurement methods actually used and the measurement methods that were expected to be used by these respondents. It was expected that firms would use measurement methods other than the net market value method.

The results are significant at the 0.001 level with 1 degree of freedom [Table 5.8]. Whilst caution needs to be taken in interpreting these results as discussed in the methodology chapter, it would appear that there are significant differences between

the expected number of firms applying the net market value method and the actual number who do.

Table 5.8
Mail Survey - Measurement Methods Utilised By Firms That Apply AASB 1037
– Test Statistics

	Observed Number	Expected Number	Residual
NMV	6	1.0	5.0
Other Methods	35	40.0	-5.0
Total	41		

	Measurement Method
Chi-Square	25.625
df	1
Asymp. Sig.	.000

A number of firms did not utilise the net market value method and indicated why they did not.

4.1.1.1 Why Did Firms Not Utilise the Net Market Value Method?

As shown in Table 5.7, of the forty-one measurement methods, the net market value method was only used six times by those firms that had applied the standard. So why did firms not use this method? Respondents were asked to provide a reason why they had not adopted the net market value approach. Twenty-five firms had not utilised the net market value method for the measurement of every one of their SGARA assets that they held. Of these firms, five firms did not provide an answer to this question. This left a total of twenty respondents that had not utilised the net market value

method that had responded to the question. The respondents' reasons as to why they had not used this method are now discussed.

From these twenty respondents, the most commonly cited reason why this method was not chosen was that there was no net market value readily available (59.1% of valid respondents). Other reasons included advice had been received from industry experts to choose the particular method that they were utilising (22.7% of valid respondents), the current method that they had chosen was less onerous and simpler to apply (13.6% of valid respondents) and that the firm had no information system capable of tracking the net market value (4.5% of respondents).

The surveyed firms favored the net present value method as the basis for measurement of SGARAs. This method will now be discussed.

4.1.1.2 Analysis of Most Utilised Measurement Method

Of those firms that had applied the standard, the net present value measurement method was the most utilised method in measuring their SGARAs. Table 5.7 indicates that 43.90% of respondents (eighteen out of forty-one respondents) used this method, as compared to the next most commonly utilised method being the net market value method used by 14.63% of respondents (six out of forty one respondents). Analysis was conducted to determine if there was a relationship that existed between the usage of this method and the value of the firms SGARAs. That is, do firms with particular SGARA values, favour the usage of this method compared to firms with lower SGARA values. Firms that had used the net present value approach were divided into two categories. The two categories chosen were firms with SGARA values under or equal to \$2,000,000 or firms with SGARA values over \$2,000,000.

It was found that a total of seventeen of the eighteen respondents that had utilised this method had a SGARA value of over \$2,000,000, that is a total of 94.44% of respondents. Respondents therefore that had a SGARA value over \$2,000,000 had a tendency to utilise the net present value method than for firms with SGARA values under or equal to \$2,000,000.

Of the total mail survey respondents, twelve firms, or 32.43% had not yet applied AASB 1037. Their responses are now discussed to assess whether their approach to measurement is different.

4.1.1.3 Analysis of Firms that had not yet applied AASB 1037

Analysis was completed to determine what the most common measurement method(s) utilised was for those firms that had not yet applied the accounting standard. This analysis was conducted to see if the results were similar or different from firms that have applied AASB 1037. Results are shown below in Table 5.9. It is interesting to note, even where firms are not required to comply with AASB 1037, the net market value method was utilised by two firms (14.29% of total) out of a total of twelve firms.

As shown in Table 5.9, there is a strong preference amongst these firms to utilise the cost method (nine responses or 64.29% of total). On further examination, it was determined that this method is preferred to be used by firms from the wine industry (seven responses out of a possible nine responses). Whilst the numbers are small, the results do appear to suggest that the measurement method favoured by firms that have not yet applied AASB 1037 is the cost method.

Table 5.9
Mail Survey - Measurement Methods
(Firms That Have Not Yet Applied AASB 1037)

Measurement Methods	Count	Responses %
NMV in an active & liquid market	2	14.29
NPV of expected cash flows	1	7.14
Cost	9	64.29
Directors Valuation	2	14.28
Total	14	100.00

The measurement methods that were used by the two firms that were interviewed, Corporation A and Corporation B in valuing their SGARAs will now be discussed to assess whether their approach to measurement is similar or different to the surveyed firms.

4.1.2 Interviewee Responses

Corporation A had two main SGARAs, being plantations and old growth forests (collectively known as the forestry estate). Corporation A valued both SGARA types utilising the same method under AASB 1037. They adopted a net present value methodology. This method was chosen rather than the net market value method because management believed *‘this method ...is a more realistic value of what the market value is worth’*.

Corporation B had two main SGARAs, being grapes and grapevines and one minor SGARA, being olive trees. The olive trees were a very minor component of Corporation B's SGARA assets. Of the approximate 29,000 hectares invested in SGARA assets, only 7 hectares related to olive groves. Being such a minor component of Corporation B's business, it was therefore agreed at the initial interview stage to omit any discussion or analysis in relation to the olive trees.

Corporation B in valuing grapevines utilised an independent valuation approach under AASB 1037 to determine the fair value of its vines and the net market value method in valuing its grapes. In valuing its grapevines, Corporation B chose this method because *'historically, the corporation has completed a broad valuation across the group every three years and this method has been seen as reliable'*.

Corporation B had undertaken a major acquisition in early 2005. The acquired corporation, known as 'Corporation C' was itself in the wine industry. Corporation C in valuing its grapevines utilised a net present value methodology and the net market value method in valuing grapes under AASB 1037. For reporting purposes, Corporation B had decided that these two different valuation systems for the two entities would be continued for the short-term until a review of the international standard process had been completed

Of these three firm's valuation methods, two assets have been valued utilising the net present value methodology, one asset utilising an independent valuation and another two utilising the net market value methodology. This is similar to the findings in the mail survey in that whilst it was expected that firms would not utilise the net market value method, the findings, whilst small, do not support this expectation.

4.2 Have the Measurement Methods Used in Accounting for SGARAs Been Applied Consistently Over Time?

This question sought to determine if the measurement methods in accounting for SGARAs have been applied consistently over time. It was expected that firms would have chosen a measurement method when implementing AASB 1037 that they have continued to apply consistently over time. As a result of this consistency, comparability of SGARA assets would be achieved across firms.

4.2.1 Mail Survey Responses

A total of 97.30% of all respondents indicated that they were applying the same method of measurement that had been applied since the standard was implemented. This total can be examined by industry as follows:

Table 5.10
Mail Survey - Percentage of Respondents Who Applied
Measurement Methods Consistently

	Wine Industry	Forestry Industry	Total
Same methods of measurement	95.65%	100%	97.30%

Only one firm in the wine industry indicated that they had changed valuation methods in valuing grapes. On the advice of industry experts, this firm had changed to the net market value method from the cost method.

The measurement methods that were proposed to be utilised by firms when transferring from AASB 1037 to AASB 141 are now discussed.

4.2.1.1 Consistency Between AASB 1037 and AASB 141

An analysis was conducted that examined the proposed methods for accounting for biological assets under the international standard, AASB 141. The purpose of this was to determine if consistency in accounting methods would be achieved in transferring from AASB 1037 to AASB 141.

Firms were asked in the mail survey if they had considered what effect the international accounting standard would have on accounting for SGARAs. Seventeen firms responded to this question. These firms held twenty SGARA assets in total. Of these twenty assets, the firms considered that fifteen (being 75% of respondents) SGARA assets would be valued in the same manner under the international standard as under AASB 1037. This left five SGARA assets that respondents proposed would be valued differently under the international standard.

Of the five SGARA assets, as shown in Table 5.11, there were very few major changes. Two firms proposed to either add a further method or delete a method off their current measurement methodology. A further two firms proposed to switch from their current measurement methods, both being market valuation methods to the most recent market price method. These changes are all considered quite minor changes. The only major change was with one firm in valuing their grapevine assets. They proposed to change from the cost method to a methodology combining net present value and independent valuation techniques. No explanation was provided as to why this firm proposed such a change.

Table 5.11**Mail Survey - Proposed Measurement Methods Under AASB 141**

SGARA Asset	Method under AASB 1037	Proposed Method under AASB 141
Grapevines	(1) NPV, Independent Valuation (2) Net market price for related assets (3) Cost	(1)NPV, Independent Valuation & most recent market price (2) Most recent market price (3) NPV, independent valuation
Plantation	(1) NPV, cost	(1) NPV
Other– SGARA asset	(1) Net Market Value	(1) Most recent market price

It is interesting to note that whilst this is a small sample size (Table 5.11), there may be very few changes to firm's measurement methods on implementation of AASB 141. The measurement methods that were utilised by the two interviewee firms are now discussed.

4.2.2 Interviewee Responses

Corporation A has consistently applied the net present value methodology since the introduction of AASB 1037. However, whilst the method has not changed over time, the calculation inputs that are used to calculate the net present value method have changed. For example, in the 2002-03 year, there was a reduction in the net market value of the forestry asset amounting to \$25.377 million. This change resulted from Corporation A revising internal policies associated with some of the specific inputs into the valuation process, including cost adjustments, change in harvest volumes and an increase in the discount rate used for hardwood plantation crops to 10.5% from 9.39% in 2002 (Tasmanian Audit Office, 2003). The cost adjustments related to the cost of improving and managing the existing crop which included overhead costs whilst the changes in harvest volumes related to the expected harvest volumes of

native forest values. The changes in the 2002-2003 year related to updated assessments of these components in that financial year.

These changes have a direct bearing on consistency and comparability in relation to this standard. Whilst consistency was maintained by Corporation A in applying the net present value methodology, the calculation inputs are subject to change. Therefore, has consistency been achieved? At the broad level, it may have been in that firms are applying the same measurement methods. However, when these measurement methods are looked at in more detail, if firms are able to change the inputs in calculating the SGARA values using these methods, consistency in applying this accounting standard is doubtful. Further, if consistency is not being achieved this makes comparability difficult to achieve across firms and across industries.

Corporation B has utilised the independent valuation approach consistently since the adoption of AASB 1037. In similar findings to Corporation A, whilst consistency has been achieved, it was noted that the inputs into this valuation approach have changed as new and updated information has become available. Further, they considered that in achieving consistency, it had come at a huge cost to the firm. Costs to the firm have included *'Annually paying valuers and management's time in considering the valuation information and the external auditor's time in examining the information'*.

These results are similar to the mail survey in that the measurement methods have been applied consistently over time since introduction of AASB 1037. However, both interviewee respondents considered that whilst the method may be applied consistently at the broad level, the inputs that go into the calculations may be different between firms and can easily be altered and changed as conditions change. It brings into question whether consistency has been achieved. Whilst consistency may have

been achieved at the broad level, if firms can alter the inputs that go into how the methods are being calculated, has consistency been achieved at all? Further, if consistency has not been achieved, comparability within firms, across firms, and across industry must also be in doubt.

4.3 Does the Type of SGARA Determine the Measurement Method?

This question sought to determine if the measurement methods used by firms to measure SGARAs is influenced by SGARA type. It is expected that measurement methods chosen by firms to measure SGARAs is influenced by the SGARA type.

4.3.1 Mail Survey Responses

Firms were asked to respond to the question '*does the type of SGARA influence the measurement method that was chosen by their firm?*' In answering this question, firms were asked to indicate utilising a scale from one to five. That is, number one indicated no influence proceeding up to number five which indicated high influence. The results are shown in Table 5.12. The number of respondents to this question was thirty-four as three respondents did not answer. The mean for both industries was 2.32, but when separated the forestry industry had a higher mean of 3.00 whilst the wine industry had a mean of 2.00.

Table 5.12
Mail Survey - Does the Type of SGARA Influence the
Measurement Method Chosen?

	Total	Wine Industry	Forestry Industry
Mean	2.3235	2.00	3.00
Median		1.00	3.00
Standard Deviation	1.73591	1.62	1.84

The level of influence measure is on a scale of 1(no influence) to 5 (high influence)

On further analysis of the respondent's answers to this question, within the wine industry, it was revealed that 69.6% of all wine respondents considered that the type of SGARA had no influence on the measurement method chosen and had chosen a frequency of one. Whilst within the forestry industry, there appeared to be inconsistency in the viewpoint of forestry respondents, in that 36.4% considered that the type of SGARA had both no influence and high influence respectively and therefore had chosen a frequency of one and five.

4.3.1.1 Respondents' SGARA Types

Respondents were asked in the mail survey to separate their most important SGARA types into main categories. For example, under a SGARA type of livestock, a firm may hold two main categories - commercial breeding stock and trading stock. This was consistent with the study by Dowling & Godfrey (2001) who identified this distinction in an examination of firm's measurement methods in the 1999 financial year.

Six main categories of SGARAs were identified from the thirty-seven respondents. Due to some respondents indicating that they held more than one main category of

SGARA asset, this combined to a total of forty-nine SGARAs in six categories. The details are as follows in Table 5.13.

Table 5.13
Mail Survey - Main Categories of SGARAs

Category	Number	Responses %
Grapevines	24	48.98
Grapes	5	10.20
Native Forest	2	4.08
Plantations	12	24.49
Other Timber	2	4.08
Other SGARAs	4	8.17
Total Reponses	49	100.0

One interesting point from this table is the grapevine and grape categories. Under the accounting standard AASB 1037, both the grapevine asset and the grape asset are required to be accounted for. Of the twenty-four respondents that indicated that they held grapevines, only five had indicated that they also held grape SGARAs. A possible explanation for this difference could be at the time of the mail survey only five firms had grapes growing on their grapevines.

For each of the six categories identified in Table 5.13, analysis was then undertaken to determine what measurement methods were being utilised by these firms, as shown in Table 5.14. Some respondents utilised more than one measurement method to value

their SGARA assets, which led to a total of sixty-two measurement methods for forty-nine SGARA assets.

Table 5.14

**Mail Survey - Cross-Tabulation of SGARA Categories and
Measurement Methods**

Category of SGARAs Measurement Method	Grapevines	Grapes	Native Forest	Plantation	Other Timber	Other SGARAs	Total
Net Market Value in an active & liquid market	2	4	-	3	-	1	10
Same or Similar Asset	1	-	-	-	-	-	1
Related Assets	3	-	-	2	-	-	5
Net Present Value	8	-	2	8	2	2	22
Cost	10	-	-	4	-	1	15
Independent Valuation	3	-	-	1	-	-	4
Directors Valuation	2	2	-	1	-	-	5
Total	29	6	2	19	2	4	62

Analysis was conducted on these responses for any relationships between the different SGARA categories and the measurement methods that were used in each category. There was no clear measurement method utilised for the valuation of grapevines. Of the respondents that held grapevines, 41.66% utilised the cost method and 33.33% utilised the net present value exclusively or in a combination with other methods. In relation to the valuation of grapes, however, 80.00% of respondents indicated that they utilised the net market value method exclusively or in a combination with other methods. Whilst the total response rate was low for grape assets, it does suggest that

the measurement method most favoured to value grapes is the net market value method. A possible explanation for the high usage of this method is that there is a ready market for the sale of grapes and therefore the net market value should be easily obtainable for grapes.

In relation to the SGARA type forestry, this type was separated into three main categories, being native forests, plantations and other timber. Of the two respondents that indicated that they held native forest assets, both utilised the net present value method. It does suggest that the net present value method could be most favoured with this SGARA asset.

With plantation SGARA assets, of the twelve respondents that indicated that they held such assets, 66.7% of respondents utilised the net present value method either exclusively or in combination with other methods. This does suggest a preference for the use of this measurement method with these SGARA assets.

In summary, there is evidence that there are preferences for some measurement methods particularly in relation to the valuation of grapes, native forests and plantation timber.

For those firms that had reported SGARAs in their financial accounts prior to AASB 1037, an analysis was conducted to determine the measurement methods that they utilised to account for these assets.

4.3.1.2 Measurement Methods Prior to AASB 1037

An analysis was undertaken to determine if prior to the requirements of AASB 1037, firms reported SGARAs in their financial reports. It was conducted to help determine

if there was evidence of firms utilising particular measurement methods for different SGARA assets prior to the implementation of AASB 1037.

It was determined that a total of ten respondents (excluding those firms that have not yet applied AASB 1037) did account for SGARAs prior to the standard requirements. Five respondents were from the wine industry and five were from the timber industry. Of these ten respondents the cost measurement methodology was utilised by seven of the respondents, one respondent utilised the director's valuation method, and two respondents utilised the net market value and net realisable value methods respectively.

Of these measurement methods by industry, it is interesting to note that all five respondents in the wine industry utilised the cost method in valuing grapevines. In the forestry industry, there was no predominate measurement method being used to measure the SGARA assets amongst the five firms with four different measurement methods being used.

These ten respondent firms were then further analysed to determine what measurement method they used on implementation of AASB 1037. This would therefore allow a pre-implementation and post-implementation analysis of these firm's measurement methods. This was conducted to see if consistency in measurement methods was maintained in the wine industry or if consistency in measurement methods was realised in the forestry industry.

The wine industry respondents, whilst being consistent prior to the accounting standard, moved to using three different measurement methods on implementation of AASB 1037, being the net present value, directors' valuation and independent valuation methods. The forestry industry respondents moved from four different

measurement methods prior to the accounting standard to five different measurement methods on implementation.

Interviewee subjects, Corporation A and Corporation B were asked to consider whether they considered whether the particular measurement method chosen is influenced by SGARA type. Their responses are now considered.

4.3.2 Interviewee Responses

Corporation A and B were both of the opinion that the type of SGARA did not determine the measurement method adopted. To determine if this actually was the case, an analysis was conducted of the categories of SGARAs that Corporation A and B (including Corporation C) held and the measurement methods that they utilised for each category.

The following table details the SGARA categories of these firms and the measurement methods utilised.

Table 5.15
Interviewee Firms - Categories and Measurement Methods Utilised

Category	Number SGARA Assets	Measurement Method	Responses %
Grapes	2	Net market value	33.33
Grapevines	2	Net present value (1) Independent valuation (1)	33.33
Native Forest	1	Net present value	16.67
Plantations	1	Net present value	16.67
Total Responses	6		100.0

Whilst small in number, these findings support the mail survey. The above findings, concur with the finding that the net market value method may be the preferred method for the valuation of grapes, with both SGARA assets being valued using this method. The native forests and timber SGARA assets, whilst there was only one SGARA asset of each in this sample, agreed with the findings of the mail survey, with the net present value method being utilised in both.

4.4 Does the Information System that is Adopted by the Firm Determine the Measurement Method?

This question sought to determine if the measurement methods in accounting for SGARAs are dependent upon whether information systems are employed to measure SGARAs. It is anticipated that firms that had developed information systems capable of recording reliable net market valuations utilised the net market value method. For firms that did not develop such systems, it is anticipated that they utilised methods other than net market value.

4.4.1 *Mail Survey Responses*

A total of 64% of respondents (not including those respondents that had not yet applied AASB 1037) indicated that they had developed information systems capable of measuring net market value by the standard's implementation date. This provided the following result.

Table 5.16

**Mail Survey - Development of Information Systems Capable of
Measuring Net Market Value by Implementation Date**

		Wine Industry	Forestry Industry	Total
Information System	Yes	7	9	16
	No	7	2	9

Of those respondents that had indicated they had developed such systems, the main measurement method utilised by respondents was the net present value method. Twelve of the sixteen respondents (75%) had used the net present value method or a combination of methods including the net present value method to account for SGARAs. Of the four remaining respondents, only two had used the net market value method to account for their SGARAs. It was quite clear from these results, that whilst firms had developed information systems capable of measuring net market value, the majority were using methods other than the net market value prescribed by AASB 1037 to measure SGARAs.

For those respondents that had not yet developed information systems capable of measuring net market value, the main method utilised by five of the nine respondents (55.55%) was also the net present value method or a combination of methods. In comparison of these two groupings³, it was evident that approximately 20% more of the respondents that had developed information systems capable of measuring net market value used the net present value method.

As it was evident from the results that the net market value method was not the main method used by firms that had developed such information systems, testing was

³ Respondents whom had developed information systems capable of measuring net market value compared to those respondents that had not developed such systems.

conducted to determine the usage of the net present value method. That is, was there a significant difference between the usage of this method for firms that had developed information systems capable of measuring net market value and for firms that had not developed information systems capable of measuring net market value?

Chi-Squared testing was conducted to determine the significance of the difference in measurement methods. The results are shown in Table 5.17. The results indicate that there is no significant relationship at the .05 level between whether or not information systems are employed and the usage of the net present value measurement method. It is interesting to note, that whilst there were no significant differences between the usage of this method between these two categories of firms, for those respondents that had not yet applied the standard⁴, only one firm utilised the net present value method (Table 5.9). Of the remaining firms, the main method utilised by these firms was the cost method.

Table 5.17
Mail Survey - Test Statistics

	Measurement Method
Chi-Square	1.001b
df	1
Asymp. Sig.	.317

Respondents that had indicated they had developed information systems capable of measuring net market value were asked to explain if such systems had produced reliable information about the net market value of SGARAs. Of the sixteen firms,

⁴ The number of firms that had not yet applied the accounting standard was twelve.

nine firms indicated that the information was reliable, one firm was unsure of reliability, five firms indicated that the information produced from such systems was quite unreliable and one firm did not respond.

On further analysis, it was found that for all five firms whom had indicated that the information was considered unreliable, they were all utilising the net present value method to account for SGARAs. This could be a possible explanation for the perceived unreliability of the systems as this method is seen as quite subjective due to the calculations that underlie the valuation method (for example, estimates for crop yields, market factors, estimates of the useful life and discount rate).

For those respondents that had not developed information systems, explanations as to why they did not will now be considered.

4.4.1.1 Respondents That Had Not Developed Information Systems

Firms that did not choose to develop such systems by the accounting standard's implementation date totalled twenty-one. Of this total, twelve firms had previously indicated that they had not yet applied the standard.

This left nine firms that had applied the standard but had chosen not to develop such systems (refer Table 5.16). Explanations put forward by these nine respondents as to why they had not developed information systems included the costs of developing such systems were too excessive, there was no current net market available and the cost of developing such a system outweighed the perceived benefits.

For the firms that had not implemented information systems, two firms in the wine industry since implementation date had developed information systems capable of measuring net market value. For all other firms that had not developed a system, they

were asked to explain why they had not. Responses included there would be little benefit to be gained from development of such systems, and there was little or no need for an information system where firms utilised independent valuers to determine their SGARA values.

The two interviewee firm's responses as to whether the measurement methods chosen are dependent upon information systems are now discussed.

4.4.2 *Interviewee Responses*

Both corporations (including Corporation C) that were interviewed had developed in-house information systems to measure and record SGARAs. All information systems had been developed over time and contained data such as the date when the SGARAs were planted, expected yields, prices and costs which are used to calculate the SGARA values. This information is quite useful in relation to the disclosure requirements of the standard. Under the standard, the methods and significant assumptions that are utilised are required to be disclosed. Corporation A discloses these assumptions in detail whilst Corporation B and C provides no detail on the assumptions.

In an analysis of the measurement methods by corporation, as provided in Table 5.18, the net market value and the net present value method were used by two firms each whilst the independent valuation method was used by one firm. There appears to be no clear measurement method being utilised by all three firms.

Table 5.18
Interviewee Firms - Measurement Methods by Corporation

	Corp A	Corp B	Corp C	Total
Net Market value		x	x	2
Net Present Value	x		x	2
Independent Valuation		x		1

Each respondent was asked to indicate if their firm's information system produced reliable information about the net market value of SGARAs. Both Corporations A and B considered that their information systems did produce reliable information. Corporation B considered that whilst reliability had been achieved, it had come at a huge cost in time and resources for both firms, B and C.

Whilst the numbers are small, the results are consistent with the findings of the mail survey. The three firms, all of whom have implemented information systems, show no clear preferences for particular measurement methods in accounting for SGARAs.

5. Summary

This chapter provided a descriptive analysis and overview of the survey and interview phase. Further, the results from the mail survey and the interview phase in relation to the accounting standard, AASB 1037 were analysed. Such analyses covered the measurement methods utilised under AASB 1037, the consistency of these measurement methods and if the type of information system used by firms determine the measurement methods used in accounting for SGARAs.

The next chapter provides the analysis from the mail survey and the interview phase in relation to the international accounting standard, AASB 141.

CHAPTER 6 : DATA ANALYSIS AND RESULTS – AASB 141

1. Introduction

Results reported in the analysis of the mail survey and interviews undertaken are discussed in relation to the international accounting standard, AASB 141. Measurement methods utilised, the implementation process and a number of general issues regarding accounting for SGARAs are discussed.

2. Analyses

2.1 What Measurement Methods Will be Used by Firms in Accounting for Agricultural Assets under AASB 141?

This question was posed to determine what measurement methods would be utilised by firms in accounting for biological assets under the international standard equivalent, AASB 141. It was expected that firms would not have considered adopting the active market measurement method in applying AASB 141.

2.1.1 *Mail Survey Responses*

From the mail survey, of the twenty-four firms that were aware of the international standard, seventeen firms had considered what effect (if any) the international standard would have on the accounting treatment of the firm's biological assets. Seven firms had not yet considered this issue. All of these firms were required to apply the standard from 01 January 2005. As the mail survey was distributed in February 2004, there was

adequate time before the international standard came into force for firms to consider the standard.

Of the seventeen firms that had considered the effect of the standard, these firms' answers were examined to determine the methods of measurement they expected to utilise in valuing biological assets under AASB 141. These seventeen firms held a total of twenty biological assets combining to a total of twenty-eight measurement methods being used to measure these assets.

These measurement methods are provided in Table 6.1. The method proposed by a large number of respondents to be utilised was the net present value method, being 42.86% of the total (twelve respondents). The active market method was proposed to be utilised by 10.71% of respondents (three respondents). Of these three respondents that anticipated using the active market method, two were in the timber industry and one was in the wine industry. In comparing these measurement methods to that of the methods utilised under AASB 1037, there appear to be no major differences in valuation methods.

Table 6.1**Mail Survey - Measurement Methods Proposed under AASB 141**

Measurement Method	Number	Responses %
Market price in an active market	3	10.71
Most recent market transaction price	4	14.30
Market prices for similar or related assets	2	7.14
NPV of expected cash flows	12	42.86
Cost	2	7.14
Independent Valuation	3	10.71
Directors Valuation	2	7.14
Total	28	100.00

A chi-square goodness-of-fit test was conducted. This test was used to examine whether a significant difference existed between the measurement methods proposed to be used and the measurement methods that were expected to be used by these respondents. It was expected that firms would use measurement methods other than the active market value method. The results are shown below in Table 6.2.

Table 6.2**Mail Survey - Measurement Methods Proposed under AASB 141****- Test Statistics**

	Observed Number	Expected Number	Residual
Active Market	3	1.0	2.0
Other Methods	25	27.0	-2.0
Total	28		

	Measurement Method
Chi-Square	4.148
df	1
Asymp. Sig.	.042

The results are significant at the .05 level with 1 degree of freedom. A significant difference between the expected number of firms applying the active market method and the number of survey participants that indicated they expect to use the measurement method is indicated.

Interviewees were also asked this question to add support to the results found under the mail survey or to suggest alternative explanations. These results are now examined.

2.1.2 Interviewee Responses

Where Corporation A has valued their SGARA assets utilising the net present value approach under AASB 1037, AASB 141 has allowed the corporation some discretion to change valuation practices. With the implementation of AASB 141 from the 2005 year, the firm changed from valuing their native forest asset as a SGARA under the previous standard AASB 1037, to valuing it under AASB 116 as Property, Plant and Equipment.

This was determined by Corporation A after consideration of AASB 141 and the requirements of the standard. Due to two main factors, it was determined that the native

forest asset was more in the nature of Property, Plant & Equipment (Tasmanian Audit Office Report, 2005):

a) The biological growth of native forests occurs up to and beyond eighty years. Therefore the biological growth requirement under AASB 141 is difficult to measure;

b) The main drivers of change in value are related to changes in the discount rate, in stumpage prices and costs associated with forest management, changes in the area of the forest and volumes to be harvested, environmental impacts and losses through wildlife.

Corporation A considered that native forests did not meet the requirements as determined under AASB 141. However, why choose to value the asset as property, plant and equipment under AASB 116? Corporation A's justification in valuing the asset under AASB 116 is that *'it is the only other logical standard relating to assets'*. On consideration of the standard this treatment does not appear to be appropriate. Under paragraph six of AASB 116, Property, Plant & Equipment is defined as tangible assets that:

- (a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- (b) are expected to be used during more than one period.

Corporation A considered that their native forest assets meet the above definition in that the assets are held to be used in the production of goods once they reach maturity. Further, the trees are expected to be used for more than one period (i.e. they are held by the firm to regenerate). This change in accounting standards has been formally approved by the firm's auditors,

Whilst, Corporation A justifies their choice of accounting standard in this manner, in paragraph four of AASB 116, it clearly states that the standard does not relate to '*biological assets related to agricultural activity*'. As the native forest asset was valued as a SGARA under the previous standard, Corporation A's arguments in valuing the asset under AASB 116 are weak. The asset would appear to be a biological asset¹ and should be valued as such.

Corporation B in considering the transition from local accounting standards to international accounting standards, had a further complication involving the acquisition of Corporation C in regard to the decision as to what measurement methods to use. In valuing grapevines under AASB 1037, Corporation B utilised an independent valuation approach whilst the acquired Corporation C had been utilising a net present valuation methodology. As considered by the interviewee '*we had a comparability issue between the two firms. We had half the firm doing it one way and the other half doing it another way*'.

On transition to the international standard, the measurement methodology for the combined corporations for grapevines was agreed to be changed to cost. This change in

¹ Refer Chapter 2, Section 4.1 for definition of biological asset.

accounting methodology was advised post-interview in December 2005. The change is centered on the rebuttal presumption in paragraph thirty, AASB 141. The rebuttal presumption considers that a biological asset can be measured reliably at fair value. However, this presumption can be rebutted at the time of initial recognition (i.e. at the time of the standards implementation) of the asset where market-determined values are not available and/or alternative estimates of fair value are considered not to be reliable. Corporation B argued that the alternative estimates of fair value that they were utilising at the time of transition to the standard were not reliable. In this situation, the asset is required to be valued at its cost less any accumulated depreciation.

It is interesting to note, in paragraph thirty-one of AASB 141, it states where an entity previously measured a biological asset at its fair value, it must continue to measure the biological asset at its fair value until disposal. As Corporation B and C previously valued grapevines under AASB 1037 using measurement methods that provided the best indicator of fair value available to them (AASB 1037, paragraph 5.3.2, 2004), it would be assumed therefore that paragraph thirty-one would override the rebuttal presumption in paragraph thirty. At the time of the interview, Corporation B considered this also to be so as they stated *'the standard states that if you had an accounting policy (measurement method) taken out under the SGARA standard, then it would be very difficult to rebut the presumption'*.

However, in their post-implementation decision to utilise this presumption, Corporation B argued that they had grounds to utilise it on the further detail provided in paragraph thirty-one as follows:

'Once a non-current biological asset meets the criteria to be classified as held for sale (or is included in a disposal group that is classified as held for sale) in accordance with AASB 5 Non-current Assets Held for Sale and Discontinued Operations, it is presumed that fair value can be measured reliably.' (AASB 141, paragraph 31, 2003)

Paragraph thirty-one considers that fair value can be measured reliably once a non-current asset is considered to be for sale. Corporation B considered that the *'valuation of vines is far too subjective. There is no observable market transaction for a vine, except when the vineyards are sold'*. For Corporation B (together with Corporation C), their non-current grapevine assets are not held for saleable purposes unless as stated above, a vineyard is sold. At that point only, they consider fair value can be measured reliably. At any point before this, fair value estimates for the grapevine assets are seen as being too unreliable by the corporation. Therefore, the valuation methodology was changed to cost.

Whilst this change in methodology could be argued to be based on the requirements of the standard, Corporation B has seemingly utilised these two paragraphs (thirty and thirty-one) in AASB 141 in such a way to ensure that they achieve the outcome that they desire. It clearly states in paragraph thirty-one, that as the company was already valuing the grapevine assets under AASB 1037, this should have continued on transition to AASB 141.

The interview results, do suggest that the change to the international standard, AASB 141 has allowed firms some discretion to change their measurement methods.

2.2 The Implementation Process of AASB 141

Interviewees were asked to consider what amount of effort had been involved to ensure compliance with the international standard, AASB 141. Corporation A considered that there *'hadn't been a huge amount of work'* to ensure compliance. Whilst stating this, they had gone through a formal review process with a resulting discussion paper on the perceived differences between the AASB 1037 standard and AASB 141. This discussion paper was provided to the organisation's auditors for review purposes to provide direction and guidance on these differences. As a result of this discussion paper, native forests have been effectively removed from the AASB 141 accounting regime, and accounted for under AASB 116.

Corporation B's view was quite similar. The firm had been working through some of the issues from AASB 141 and were still working through these issues at the time of interview, in particular the ability to utilise the rebuttal presumption.

At the time of interview Corporation B was examining whether or not this measurement method option was available to their firm. As stated by Corporation B *'we were very keen initially about the rebuttal presumption as it demonstrates that where you cannot reliably measure a fair value of vine, we could revert to cost'*. However, as considered by Corporation B, *'the standard states that if you had an accounting policy (measurement method) taken out under the SGARA standard, then it would be very difficult to rebut the presumption'*. On subsequent implementation, Corporation B chose to utilise this presumption in a post-interview decision for grapevine assets. They considered that the fair value estimates for these assets in their opinion were not reliable and thus, under

paragraph thirty of AASB 141, the asset was required to be valued at cost based on the rebuttal presumption.

2.3 What is the Public's Point of View on this Accounting Standard?

Respondents were asked to consider in their opinion, had the public (for example, shareholders, analysts, public scrutiny groups) come to understand the reporting of SGARAs (biological assets) in the financial reports?

Corporation A considered that *'it (the reporting of these assets) is still a confusing issue for the public'*. Whilst stating this, there was no direct evidence provided by Corporation A to support this claim. In an attempt to reduce this perceived lack of understanding, Corporation A now separates the SGARA (biological growth) increment or decrement from operating profit in the Income Statement. This is done for two reasons – *'to ensure transparency and so that we can talk about operating (revenue and) costs quite separately from the forestry valuation and the public can see the figure that we are talking about'*.

Corporation A found that this was necessary due to the volatility in the valuation adjustment from year to year in the Income Statement. By not separating the two components, *'it makes it messy. Your profit can soar by 50 or 60 million dollars and the public thinks that the company (Corporation A) has made a huge profit. Then we have to explain, no, it's actually just an increase in forestry valuation'*. Corporation A appears to be quite proactive in this area – they are equipping their end users with necessary information to gain an understanding of the reporting of SGARA assets and attempting to reduce any confusion in the public arena. In the financial statement survey conducted by

Booth & Walker (2003), they also found direct evidence of volatility in the net profits of the five firms they examined, As considered by them, *'the effect of applying AASB 1037 was to increase reported net profit by as much as 33% (Southcorp), 43% (Cranswick) and 198% (Pipers Brook)'*.

Corporation B, have also found that there is still a lack of understanding in the public arena. However, even where the public do understand, they believe it doesn't actually achieve anything as the public cannot use this information in any way in the decision making process. As a result of this, they typically present the financial report to the financial markets with the SGARA dollar values removed first. Further, they have found that reporting analysts remove the SGARA numbers before any analysis is conducted. This is consistent with the findings from Booth & Walker (2003) who found it difficult for analysts to undertake reasoned comparisons of the financial performance of winemakers, due to inconsistent and incomplete assumption disclosures made by such businesses.

As an example of the lack of understanding in the public arena, Corporation B commented:

'We once sat down with an analyst explaining the accounting treatment to him and he finally understood it (after we explained it). He said 'oh that's right' and then just went away. That was the end of it.It helped him understand it which was great but then once he understood it, he couldn't do anything with the information for any decision-making processes'.

However, without the ability to directly question this analyst, it is difficult to determine if the analyst did actually understand the accounting standard.

This viewpoint is complemented by the mail survey comments. In the survey, respondents were asked as the final question, 'have you any other comments relating to the accounting treatment for SGARAs, specifically the stated aims of consistency and comparability?' Of the total thirty-seven respondents, sixteen made comments on a number of issues. One respondent commented on this issue as follows, '*Analysts discount the effect of SGARAs, the value of the SGARA is somewhat arbitrary. It has a nil bottom line impact; we therefore question its usefulness*'. Further, as was summed up by another respondent '*the users and shareholders would not have a clue what they are being presented with. To them it is just more paperwork which is too difficult to understand*'. Again, no evidence of this perceived lack of understanding was provided to support this claim.

Booth & Walker (2003) considered that it would be reasonable to suppose that for stakeholders to understand how SGARA revenues were calculated, they would require disclosure of the key assumptions underlying the valuation processes. In an examination of the two interviewee financial statements, it was found that Corporation A disclosed all major assumptions in the notes to their financial statements. However, neither Corporation B nor Corporation C disclosed any major assumptions underlying the calculations of the SGARAs. In their respective notes to the financial statements, the following comments were made '*In determining the net market value, certain assumptions have been made including market prices, yields and quality of grapes and*

vineyard operating costs'. This provides no information to help users and stakeholders gain an understanding on how the SGARAs were calculated.

In further questioning of why these assumptions were omitted, Corporation B considered that the average end user of financial reports had no understanding of what these assumptions meant, therefore, there was little point in including them. As stated by Corporation B, *'the calculation assumptions are of no use to anyone, the end users do not understand the final figures and what they represent so how they can be expected to be interested in the assumptions'*. However, since the end user is not provided the assumptions, the end user will not be able to gain an understanding and therefore support the corporations belief. Further, without providing any direct evidence, Corporation B has assumed that they know how end users think and that they know what end users are interested in and therefore, they have made the decision not to provide the calculations for end users.

2.4 Was there any Influence from Within each Industry in Choosing Particular Measurement Methods?

In relation to each accounting standard, both Corporations considered that there had been no influence from industry advocates to choose a particular measurement method to value their SGARAs (biological assets). Corporation B noted that there was no real discussion from within the industry or between firms at the time of implementation to discuss the most appropriate method for that particular industry. Whilst the industry had participated in providing comments during the developmental process of both AASB 1037 and AASB 141, the industry had focused on putting forward arguments as to why they should be

totally excluded from the standard requirements; *‘most people (within the industry) focused on just saying we don’t want to do it (apply the standard) as opposed to coming up with a method to use. It would have been difficult for the industry to say we don’t want to apply it but if we had to, we suggest that method ‘A’ be used’*. Corporation B noted that if the industry had have come up with a preferred method, then this would have been seen by many as acceptance of the standard and its requirements. An alternative viewpoint though to this is if the wine industry had been pro-active in this area and recommended a solution to the problem, this would have helped ease individual vineyard’s concerns.

2.5 Was it the Right Decision of Standard Setters to Comply with the International Standards at this Time?

Both corporations felt that it was important to have an internationally accepted set of accounting standards. Corporation B, being a global organisation considered that the move *‘would bring about global consistency and comparability in reporting’*. Further, they could see the benefits in having a global common set of accounting standards, through increased understandability between preparers of financial reports across different countries. As the same set of accounting standards would be utilised, this would ensure that over time, the preparers of financial reports would come to a common understanding of the terms, key definitions, methods and disclosure requirements under these standards rather than focusing on their own domestic accounting standards.

Corporation A did not consider having an international set of accounting standards important from their firm’s perspective as the firm is not globally based. However, for firms that are global, Corporation A could see the potential benefits with this move to

international standards with the main benefit in their opinion being consistency in financial reporting. Whilst both corporations agreed that it was important to have international accounting standards, they were of differing opinions as to whether it was the right decision by Australian standard setters to comply with the international standards at this particular time.

Corporation A considered that it was the right decision to comply with the international standards. However, Corporation B considered that the acceptance by Australian standard setters of international standards was wrong and in particular, the standard (AASB 141) should have totally excluded the wine industry from the standards requirements. Corporation B did state though that the real issue was not compliance with AASB 141 but rather the introduction of accounting for SGARAs into Australia in the first instance. They considered that the wine industry should have been excluded from the original AASB 1037. This particular viewpoint is not just confined to this firm. This issue of excluding the wine industry has surrounded the accounting standard from even prior to the implementation of AASB 1037. The industries' arguments on being excluded are based on a number of issues and were considered in the comment letters to ED 83:

- In determining a value of a vineyard, there are many factors that need to be considered other than just the number and type of vines held. Factors include the geographical location, topographical and climatic aspects, water access and irrigation methods, vine spacing and many others. In attempting to determine the value of vines by deducting the values of all these elements, may result in useless information;

- There is difficulty in determining a net market value due to variances in geographical location, topographical and climate aspects. These variances all impact on growth of the vine and the quality of the grape grown as the quality of the land and climatic conditions will dictate the produce. This provides practical difficulties in comparing vineyards with the value of vineyards on the market.
- There is only a ready market for the end product, being the grapes.

It is interesting to note, that fruit trees are considered to be quite similar compared to grapevines in their measurement issues when applying this standard. Whilst the wine industry were quite vocal in their opposition to this proposed accounting standard, with seventeen comment letters received, only one letter was received from the orchard industry. A possible explanation for this is that the wine industry and the individual firms within this industry are quite active lobbyists within Australia compared to the orchard industry on issues that affect their industry. Thus, more firms from the wine industry saw this as an opportunity to voice their disagreement with the proposed standard in writing comment letters to ED 83.

2.6 Future Developments of the Accounting Standard

The respondents were asked if they were able to change anything in the standard, what changes would be desirable in a future revised standard. Corporation A considered that in a revised standard, the requirement for gains and losses to be included in the income statement (AASB 141, paragraph 26, 2003) should be removed. As considered by Corporation A, their net profit can increase by 50-60 million from one year to the next of

which this increase can be largely made up of changes in the forestry valuation. Corporation A considered that the fluctuations in profits from year to year as a result of including these valuation adjustments *'is causing anxiety for a lot of firms as it has a direct bearing on the net profit or loss for the year'*. This brings undue media and public attention to their firm as it is reported in the media that the firm has had huge increases in operating profits for that financial year when it actually relates to changes in the forestry valuation.

Corporation B wanted the complete exclusion from the standard for long term bearer SGARAs i.e. grapevines. However, they agreed that the produce from the long-term SGARA, being the grape should be valued at net market value as there is a ready market value for that asset.

These comments are also evidenced by the mail survey comments. A total of five respondents from the wine industry, made comments specifically in relation to excluding grapevines totally from the standard altogether. Comments included *'It (the standard) does not achieve anything worthwhile and should be abandoned for the vineyard sector'*. Further, *'the standard would seem to be a nonsense standard as for vines'*. However, no evidence was provided from the mail survey respondents to back these comments up.

In relation to the issue of the removal of the requirement to record gains and losses in the profit or loss for the period concerned, a total of four respondents commented on this issue. Three respondents were from the wine industry and one respondent was from the forestry industry. Comments included *'It is the most ridiculous standard ever. Taking the change through the profit and loss attracts unfavourable attention from stakeholders*

when it really has no place in the profit and loss statement'. These comments are similar to the comments made by Corporation A. Corporation A separates the SGARA (biological growth) increment or decrement from the operating profit in the income statement in an attempt to reduce any confusion and appear more transparent in the public arena.

2.7 Has Consistency and Comparability Been Achieved Through the Introduction of AASB 1037 and the Subsequent Adoption of AASB 141?

Corporation A considered that consistency has been achieved at the firm level, by firms now applying measurement methods consistently. However, they believe that comparability within their industry has not been achieved – *'I try and compare myself to the other players. It is difficult though as everyone's doing it differently. Unless you know how people are actually reporting it, you are not comparing apples with apples'*. They argued that this view was supported by previous research that they have conducted themselves. They examined how other public forest enterprises have reported their valuation increments and/or decrements. They found that all forestry enterprises report their SGARA assets slightly differently, and together with using different methods to report their forestry assets and not providing full disclosure of major assumptions, it has made comparability between enterprises very difficult.

Further, Corporation A has found that firms are utilising different inputs for financial ratio calculations. For example, Corporation A calculates return on assets excluding the forestry asset whilst other firms include it. The result of these differences is that

benchmarking across the industry has become very difficult to the point where Corporation A does not benchmark anymore.

Corporation B agreed that consistency has been achieved at the firm level. However, they considered that this has achieved very little as firms within their industry are utilising different methods, different valuation assumptions in calculating the value of the SGARAs and are reporting the assets differently. As stated by them, *'Who cares about consistency? (Corporation) B and (Corporation) C have been out there doing it differently (from each other) for the last five years'*. Corporation B further considered that it was very difficult to compare across the industry as the values that firms were applying to their SGARA assets, namely grapevines was making comparability difficult - *'if you had to come up with a value, ... if you had four different valuers, you would come up with four different answers (values)'*. Where firms utilise independent or directors' valuations in valuing their grapevine SGARA assets, there is the possibility that different values will result as there is an element of subjectivity in using these methods.

Two respondents commented on the issue of consistency and comparability in the mail survey. One believed that consistency and comparability had been achieved. However, they considered that the cost of complying with the standard outweighed the benefits of the standard. The other respondent considered that whilst consistency had been achieved, comparability had not – *'large swings in the profit and loss account resulting from SGARA movements doesn't help people trying to analyse financial statements, when they are not reflective of the underlying result'*.

3. Summary

A number of questions that were raised in the mail survey and the interview phase in relation to the international accounting standard, AASB 141 have been analysed. Such questions surrounded the measurement methods utilised under AASB 141, the implementation process from AASB 1037 to AASB 141 and issues surrounding the accounting standard in general.

The next chapter provides the discussion of results from the previous chapter, chapter five and this chapter together with a summary of the study.

CHAPTER 7 : DISCUSSION AND CONCLUSION

1. Introduction

In this chapter whether or not the movement to a regulatory environment has achieved comparability and consistency amongst reporting entities in accounting for SGARAs is discussed. This is considered from the position of the superseded standard, AASB 1037, and the implications of the movement toward the international standard, AASB 141. The discussion takes place in the context of the hypotheses posed in this study.

2. Results – AASB 1037 Analysis

This study sought to test whether the qualitative objectives of comparability and consistency in reporting practices have been achieved through the implementation of AASB 1037 and the subsequent adoption of AASB 141. In this section, the results are discussed in relation to each of the hypotheses that examined AASB 1037.

2.1 Hypothesis One (H1) : *In Accounting for (SGARAs) AASB 1037, Firms Do Not Use the Net Market Value Method.*

Hypothesis one sought to examine and explain the measurement methods utilised by respondents in accounting for SGARAs under AASB 1037. It was expected that firms would not utilise the net market value method due to the non-existence of active and liquid markets or that firms simply prefer not to use this method of measurement (Dowling & Godfrey, 2001).

However, in the analysis of the mail survey there were found to be differences between the actual measurement methods that were utilised under AASB 1037 and those that were expected to be utilised. Across a total of twenty-five firms, the net market value method was used 14.63% of the time. This result was considered significant at the 0.001 level with 1 degree of freedom¹. The results indicated that a range of methods are used in practice including the net market value method. These results differ from the Dowling & Godfrey (2001) study who predicted that the net market value method would not be used by firms.

The survey results were supported by the two interviews that were conducted. Of the interviewee firm's valuation methods, three assets were valued utilising the net present value methodology, one asset utilising an independent valuer and another two utilising the net market value methodology. Thus, hypothesis one is not supported – that is, under hypothesis one, it was considered that the net market value would not be used. However, on analysis whilst it was found that some firms do not use this method, it was also found that some firms do use this method.

For those firms that did not use the net market value method under AASB 1037, a number of explanations were put forward with the major justification being there was no net market value readily available.

It would appear that the introduction of this accounting standard has not brought about consistency in the application of measurement methods. Only a small percentage of firms have utilised this method (14.63%) with the remaining firms utilising a number of

¹ Resulting from a chi-square score of 25.625.

different methods with the net present value method being the most predominate. It is interesting to note, that for firms that have not yet applied the standard, 14.29% of these firms have themselves used the net market value method. Thus, approximately the same percentage of firms use this method whether they have or have not applied the standard. There does not appear to be any substantial impact of a prescribed accounting method under AASB 1037. Firms that have applied the standard are not utilising this accounting method any more than those firms that have not applied the standard. Therefore, consistency in measurement methods has not been achieved by the introduction of the net market value method under AASB 1037.

2.2 Hypothesis Two (H2): In Accounting for SGARAs under AASB 1037, Firms Have Applied Measurement Methods Consistently Over Time.

Hypothesis two attempted to determine if the measurement methods in accounting for SGARAs have been applied consistently over time. It was anticipated that firms would have chosen a measurement method when implementing AASB 1037 that they could continue to apply consistently over time, thereby achieving comparability across firms.

From an analysis of the mail survey results, a total of 97.30% of all survey respondents were found to have applied the same method of measurement since the standard was implemented. Thus, hypothesis two is supported. Further, it was also found that consistency should be achieved on transfer to the international standard, AASB 141. Of a total of twenty SGARA assets, fifteen assets would be valued the same way under the international standard as under AASB 1037. Of the remaining five SGARA assets, only

one major change was proposed with the method proposed to change from cost to a combination of net present value and independent valuation techniques.

Whilst the two interviewees agreed that consistency in measurement methods had been achieved at the firm level under AASB 1037, they had found that the inputs that go into the measurement method calculations can cause differences between firms and could easily be altered and changed as conditions change. This then brings into question whether consistency in measurement methods has been achieved at all because if firms can alter the calculation inputs at their own discretion, how can consistency in measurement methods be achieved? Further, as a result of this, the ability to compare within firms, across firms and across industries must be impaired. This might well be an avenue for future research to examine if this finding across these two firms is just an isolated finding or is it across other firms as well.

2.3 Hypothesis Three (H3): The Type of SGARA Determines the Measurement Method Adopted.

The next hypothesis sought to determine if the type of SGARA determined the measurement methods used by firms. It was expected that such methods would be influenced by the SGARA type. In an analysis of the mail survey results, there was found to be evidence of preferences for particular measurement methods in relation to the valuation of grapes, native forests and plantation timber. In valuing grapes, 80% of respondents indicated that they used the net market value method exclusively or in a combination with other methods. Whilst for native forests and plantation timber, the net present value method was most favoured amongst respondents.

The results from the two interviews concurred with these findings. The net market value method was used by the interviewees to value grapes and the net present value method was utilised in valuing the two forestry assets. These results therefore indicate that the type of SGARA may well play a role in the determination of the measurement method in relation to grapes, native forests and plantation timber for firms that have applied AASB 1037. Thus, hypothesis three is supported.

To determine if these preferences existed prior to AASB 1037 or if they have been brought about with the introduction of the standard, measurement methods prior to the introduction of AASB 1037 were examined. Ten firms had accounted for SGARAs prior to the standard requirements. It was found that there were preferences between grapevine assets and the usage of the cost method prior to the introduction of the accounting standard. However, on implementation of AASB 1037, this preference was not maintained as firms moved to a number of different measurement methods. Therefore, whilst consistency in measurement methods was found in one SGARA type pre-AASB 1037 implementation, it was found that this consistency did not continue on implementation.

Rather, the particular measurement method preferences found in grapes, native forests and plantation timber for firms that had implemented AASB 1037 have evolved since the introduction of this accounting standard. This suggests that consistency in measurement methods has been achieved for these particular SGARA assets with the introduction of AASB 1037.

2.4 Hypothesis Four (H4): The Information System Adopted Determines the Measurement Method Used to Measure SGARAs.

Hypothesis four sought to determine if the measurement methods used by respondent firms were dependent upon whether or not information systems were employed to measure SGARAs. It was anticipated that for firms that had developed information systems capable of recording reliable net market valuations, they would utilise the net market value method. For those firms that had not developed such information systems, it was anticipated that they would utilise other measurement methods other than the net market value method to value their SGARA assets. Thereby, creating consistency based on whether or not information systems had been developed by individual firms. This adopted reasoning was based on a study conducted by Dowling & Godfrey (2001), in which they considered that a possible reason as to the limited use by firms of the net market value method may have been due to the absence of information systems capable of detecting, tracking and recording reliable net market values.

However, of the mail survey results, it was found that for firms that had developed information systems capable of measuring net market value, only two firms from a possible sixteen used the net market value method in valuing their SGARAs. An analysis was conducted that examined the most utilised method of these firms, being the net present value methodology. The analysis sought to determine if there was a relationship between this method and the development or non-development of information systems. The results indicated that no significant relationship existed.

Mail survey respondents that had not developed such information systems were asked to explain why they had not. Responses included there would be little benefit to be gained from development of such systems, and there was little or no need for an information system where firms utilised independent valuers to determine their SGARA values.

The results from the two interviews concurred with the findings from the mail survey. Whilst the interviewee firms had developed information systems, there was no clear measurement method being utilised by each firm. The net market value and the net present value method were used by two firms each whilst the independent valuation method was used by one firm.

These results therefore indicate that the development of information systems does not have any bearing on the measurement method used to measure SGARA assets for firms that have applied AASB 1037. Thus, hypothesis four is not supported.

2.5 *Summary*

In summarising the findings, it was found that only a small number of firms have applied the net market value method as specified in AASB 1037 with the remaining firms utilising a number of different methods. Thereby, consistency in using a prescribed accounting method has not been achieved by the introduction of AASB 1037. Whilst consistency has been found through measurement methods having been applied consistently over time, consistency in inputs that are used in measurement method calculations was not found, thereby bringing into question whether consistency has been achieved at all.

Consistency was found through measurement methods being applied to three SGARA types being grapes, native forests and plantation timber. Whilst the usage or non-usage of information systems capable of measuring net market value was not found to determine the type of measurement methods being utilised by firms.

The next section discusses the results in relation to the international standard, AASB 141.

3. Results – AASB 141 Analysis

In this section, the results are discussed in relation to hypotheses five and the move to the international standard, AASB 141.

3.1 Hypothesis Five (H5) : In Accounting for (Biological Assets) AASB 141, Firms do Not Anticipate the Utilisation of the Active Market Method.

Hypothesis five sought to determine what measurement methods would be utilised by firms in accounting for biological assets under AASB 141. It was expected that firms would not use the active market method in applying this accounting standard. This was based on a previous study by Dowling & Godfrey (2001) where they considered the net market value method would not be used due to the non-existence of active and liquid markets or firms simply prefer not to use this method of measurement. As the net market value and the active market value are considered to have the same meaning, it would be reasonable to expect that under AASB 141, the active market method would not be used.

However, the mail survey results were inconsistent with this expectation. A number of firms proposed to utilise the active market method. Of a total of twenty-eight measurement methods used to measure twenty SGARA assets, the active market method

was proposed to be used three times (10.71% of respondents). This result was considered significant at the 0.05 level with 1 degree of freedom². This result was similar to the results from hypothesis one, in that a small number of firms would utilise the method as prescribed under the accounting standard. Whilst stating this, with the introduction of this standard, it would seem that consistency in measurement methods may not be achieved. Firms have indicated that they will utilise a number of different methods with only a small percentage using the active market method, the method prescribed under the standard.

Of the interviewee firms, these results differed quite significantly from the survey results. Both firms, in implementing AASB 141, did not use the active market method in accounting for biological assets. Corporation A changed accounting standards in valuing native forests. Where previously they were measured using the net present value methodology under AASB 1037, on implementation of AASB 141, these assets were accounted for under AASB 116 as Property, Plant & Equipment. Corporation A's justification in valuing the asset under AASB 116 is that '*it is the only other logical standard relating to assets*'. AASB 116 clearly states that the standard does not include biological assets that relate to agricultural activity. Having valued their native forests previously under the SGARA standard, it would be difficult for Corporation A to argue otherwise. This asset is clearly a biological asset³ and should be valued in accordance with AASB 141, not AASB 116.

² Resulting in a chi-square score of 4 148.

³ Refer Chapter 2, Section 4.1 for definition of biological asset.

Corporation B changed measurement methods in valuing its grapevines. Under AASB 1037, the grapevine asset was valued using the net present value methodology (Corporation B) and independent valuation techniques (Corporation C). In implementing AASB 141, these measurement methods were changed to cost. This change was centred on the rebuttal presumption in paragraph thirty and the fair value measurement in paragraph thirty-one, AASB 141. However, having previously valued their grapevine assets using fair value techniques under AASB 1037, this should have continued on transition to AASB 141. It appears therefore, that the change to the international standard may have provided an opportunity for firms to change the way they value their SGARA assets, perhaps not rightly so.

It must be noted that one of the differences between these two results was the timing of the research - the mail survey was conducted pre-implementation of AASB 141 whilst the interviews were conducted post-implementation. Only further research can provide a true determination for Hypothesis Five - as the mail survey results do not provide support for this hypothesis. However, the interview responses do provide support. However, it may be too early to know the true effects of AASB 141 with the standard only having been implemented from 01 January 2005.

In the following section, the results in relation to the implications of the movement to the international standard, AASB 141 and the issues that firms encountered in making this change are discussed.

3.2 *Transition from a Local Standard to an International Standard*

Both Corporation A and B considered the transition from AASB 1037 to AASB 141 as quite smooth as they considered it as being one of the minor standards in the accounting standards regime. Having said this, both went through formal reviews as part of the transition to international accounting standards. Further, as a result of these reviews, both corporations changed their measurement methodology in accounting for biological assets, as previously discussed in Section 3.1 above.

From a users' perspective, both Corporations considered that there was still very limited understanding of the reporting of these assets in the financial statements. Corporation A considered that *'it (the reporting of these assets) is still a confusing issue for the public'*. Whilst there was no direct evidence provided as to this lack of understanding, these viewpoints are consistent with the study conducted by Booth & Walker (2003). With the requirement to account for these assets having been in place now since 2001, this is quite disappointing. An educational program aimed at improving this lack of understanding should be implemented by the AASB, otherwise this problem will continue to persist.

It should be noted though, that this lack of understanding may be caused partially by firms themselves. Corporation B does not attempt to educate the public by providing details in the notes of the major assumptions that underlie the calculation of SGARA valuations nor do they identify the SGARA profit separately in the income statement. As stated by Corporation B, *'the calculation assumptions are of no use to anyone, the end users do not understand the final figures and what they represent so how they can be expected to be interested in the assumptions'*. How can the public gain an understanding

of these assets and the calculations behind them, if firms do not provide this information for them to gain that understanding? The requirement under AASB 141, paragraph 47 for firms to '*disclose the methods and significant assumptions applied in determining the fair value*' needs to be more rigorously enforced by the accounting profession.

Both Corporations considered it necessary to have an internationally accepted set of accounting standards. They considered that it would potentially increase understandability, global consistency and comparability in financial reporting. However, the two Corporations were of differing opinions as to whether they believed that it was the right decision by Australian standard setters to comply with the standard at this particular point in time. Corporation A considered it was the right decision whilst Corporation B considered it was not and in particular, the wine industry should have been excluded from the accounting standard requirements. On further questioning, Corporation B did state perhaps the real issue though, was that the wine industry should have been excluded from the original AASB 1037 standard due to the many issues involved in the valuation process of grapevines.

Whilst Corporation A appeared to have accepted the standard and had applied it to their firm, it appeared that Corporation B were still refuting the standard and were doing all that they could to attempt to obstruct the standard in their industry. There appears to be an element of self-interest involved here – Corporation B appeared to be only interested in themselves and their industry and didn't want to look beyond to the users, to the shareholders, and to the other industries within the Australian agricultural environment. Further research needs to be conducted here - is this element of self-interest just confined to this particular firm or is it within the wine industry itself?

In relation to consistency and comparability, both corporations considered that consistency had been achieved at the firm level in accounting for these types of assets. However, both considered that comparability has not been achieved. As Corporation A considered, *'I try and compare myself to the other players. It is difficult though as everyone's doing it differently'*. This is a result of different firms using different measurement methods, reporting styles, inputs into ratio calculations and valuation assumptions.

3.3 Summary

In summarising the findings, it was found that a number of firms proposed to utilise the active market method on implementation of the standard. However, the interview results differed from this finding in that on implementation, both firms did not use the active market method. One firm changed accounting standards whilst the other firm changed measurement methods to value their biological assets at cost. It appears therefore that consistency in using a prescribed accounting method has not been achieved with the implementation of AASB 141. However, with the standard having only been implemented from 01 January 2005, it may be too early to tell.

Other issues were discussed in relation to the movement to AASB 141. Such issues included the implementation process, the public's perception of the accounting standard, the general need to have an international set of accounting standards and whether consistency and comparability has been achieved through the introduction of a prescribed accounting method under AASB 1037 and the subsequent AASB 141 standard.

In the next section, the limitations of this study are discussed.

4. Limitations of Study

As with any study there were a number of limitations that need to be discussed. While a response rate of 33.33% to the mail survey is acceptable the sample itself was quite small. Support by additional interview work would complement this work and make the results more conclusive (or otherwise).

A further limitation with the usage of mail surveys is that the answers to questions are conditional on the type of questions being asked. The questions asked may only elicit part of the users views (Alreck & Settle, 1985). In an attempt to avoid bias within the structuring of questions, an open-ended broad question was included at the completion of the survey asking respondents to provide any comments that they wished to make in relation to the general subject matter.

In relation to the personal interviews that were conducted, a limitation overriding the interviews was the risk of bias, both through the interviewers and the interviewees own attitudes and perceptions (Kidder, Judd & Smith, 1986). To minimise this bias, standardised interview techniques and questions were utilised.

It also must be acknowledged that a restriction of this study was the confinement to two industries within Australia, being the wine and the forestry industry. As individual industries have their own issues and idiosyncrasies, it would be difficult to extrapolate the results from this study across all industries within Australia.

Finally, with the introduction of AASB 141 from 01 January 2005, the results found in this study need to be treated as tentative as the full effect of this standard may not be known for some time yet.

The following section discusses the directions and opportunities for future research.

5. Future Research and Opportunities

As this study was an exploratory study, there are a number of directions future research could take. Whilst this study focused on the wine industry and forestry industry, future research could examine other major industries affected by the SGARA (biological assets) standard to examine whether similar results are obtained. Equally, further research could also be undertaken in the wine industry. As an industry, it appears to be more active in opposing issues that do not align with its own views. There may be specific agendas of self-interest in place but further research would be required to confirm this.

Having concentrated on two firms in the interview stage and the impact of moving to the international standard, AASB 141, future research could involve a larger number of firms to determine whether similar results found in these two interviews are obtained.

With the acceptance of international standards by over seventy countries, investigations could be conducted to examine the measurement methods utilised in other countries and across different industries in relation to the biological assets standard as this standard becomes more widely applicable.

APPENDICES

Appendix One : Exposure Draft 83

The Boards requested the following in relation to ED 83:

General Comments

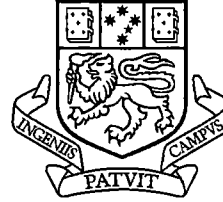
- 1 Clear overall opinion on whether the Exposure Draft, in general, is supported.

Specific Comments

- 2 The proposed definition of SGARAs and the types of SGARAs that are proposed to be excluded from the standard. Should the scope be more narrowly or more broadly defined, and if so, why?
- 3 The proposal to require a SGARA to be measured at its net market value. Are the measurement requirements clear for those situations in which current prices in active and liquid markets are observable and where they are not observable?
- 4 The proposal to require changes in the carrying amount of a SGARA to be recognised in the profit and loss or other operating statement in the reporting periods in which the changes occur.
- 5 The proposal to require that the cost of non-living produce obtained from a SGARA should be the net market value of the produce immediately after it becomes non-living.
- 6 The proposal to require SGARAs to be separately presented in the statement of financial position, without classification into current and non-current portions, including the proposal that SGARAs should be recognised separately from any non-SGARAs to which they are attached.

7 The proposal to require the following to be disclosed:

- a. Information about the nature and physical quantity of SGARAs;
- b. Information about any significant externally imposed restrictions on SGARAs
- c. Information about the carrying amounts of SGARAs that are not based on current market prices observed in active and liquid markets, and the sensitivity of those carrying amounts to changes in the assumptions made in deriving them.



UNIVERSITY OF TASMANIA
School of Accounting and Finance

Appendix Two: Mail Survey

«FirstName» «LastName»
«JobTitle»
«Company»
«Address»«City»
«State» «PostalCode»

21 January 2004

Dear «FirstName»

I am an Accounting Masters student at the University of Tasmania under the supervision of Dr Trevor Wilmschurst. I am conducting research into the implementation of AASB 1037/AAS 35 '*Self-Generating and Regenerating Assets*'. Specifically, I am examining whether the aims of consistency and comparability, argued to be at the foundation of the standard, have been achieved through its implementation.

To assess whether this has been achieved I am surveying a number of firms and I would appreciate your assistance in completing the attached questionnaire. The results of this study will contribute to the ongoing debate surrounding the accounting treatment for self-generating and regenerating assets.

To assist you in responding to the questions, I have explained the meaning of a number of terms used throughout this study on the first page of the questionnaire.

As the questionnaire does not request your name (or that of your firm), your response will be entirely anonymous. I will not be able (nor will attempt) to identify you or your firm on receipt of the completed questionnaire. Although the results of the study may be published, it follows that they cannot be published in a way that potentially identifies you or your firm.

I would be most happy to provide you with a summary of the results when completed. If you would like a copy, please complete the attached sheet and return it in one of the prepaid envelopes provided.

This study has been approved by the Human Research Ethics Committee (Tasmania) Network. If you have any concerns of an ethical nature or complaints about the nature in which the project is conducted, you may contact the Executive Officer of the Human Research Ethics Committee (Tasmania) Network.

Executive Officer : Amanda McAully
Email: Amanda.mcaully@utas.edu.au
Phone: 03 62262763
Fax: 03 62267148

Please return the completed questionnaire in the prepaid envelope provided. I can be contacted on 03 63243661 or Belinda.Williams@utas.edu.au if you have any further questions.

Yours sincerely

Belinda Williams
University of Tasmania

Attention: Belinda Williams
University of Tasmania
School of Accounting and Finance
Locked Bag 1314
Launceston Tas 7250

To Whom It May Concern

On conclusion of this study, please provide the following firm with a summary of the results:

Firm Name _____
Address 1 _____
Address 2 _____
City _____
State & Postcode _____

Yours sincerely

Signed: _____
Position: _____

Please place this completed sheet into one of the prepaid envelopes provided.

QUESTIONNAIRE

Definition of Terms

Active and Liquid Market	A market in which willing buyers and sellers can normally be found at any time.
Fair Value	The amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction.
Net Market Value	The amount which could be expected to be received from the disposal of an asset in an active and liquid market after deducting costs expected to be incurred in realising the proceeds of such a disposal.
Self-Generating and Regenerating Asset (SGARA)	Living animals and plants that have an inherent capacity for growth, production, procreation and degeneration.

1. What is your job title?

2. What is the business structure of your firm? *(Please tick)*

- | | |
|---|---|
| <input type="checkbox"/> Listed Company | <input type="checkbox"/> Sole Proprietorship |
| <input type="checkbox"/> Unlisted Company | <input type="checkbox"/> Government |
| <input type="checkbox"/> Partnership | <input type="checkbox"/> Other, please specify; _____ |
| <input type="checkbox"/> Trust | |

3. What industry group does your firm belong to? *(Please tick)*

- | | |
|---|---|
| <input type="checkbox"/> Livestock | <input type="checkbox"/> Forestry and Timber |
| <input type="checkbox"/> Wineries and Vineyards | <input type="checkbox"/> Fisheries |
| <input type="checkbox"/> Orchards | <input type="checkbox"/> Other, please specify; _____ |

4. From the latest Statement of Financial Position, what is the value of your firm's SGARAs, in AUD? *(Please tick)*

- ☐ Less than \$50,000
☐ \$50,000 to \$500,000
☐ \$500,001 to \$2,000,000
☐ Over \$2,000,000

5. In which financial year did your firm first commence applying AASB 1037/AAS 35?

- | | |
|-------------------------------|--|
| <input type="checkbox"/> 1998 | <input type="checkbox"/> 2001 |
| <input type="checkbox"/> 1999 | <input type="checkbox"/> Have not yet applied the standard |
| <input type="checkbox"/> 2000 | <input type="checkbox"/> Other, please specify: _____ |

(Please tick)

6. Indicate how important the following SGARA types are to your firm:

	Least Important				Most Important
Fish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grapevines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Livestock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orchards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Does the type of SGARA influence the measurement method chosen by your firm?
(Please tick)

No Influence					High Influence
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For the **most important SGARA type** that your firm holds (as indicated in question 6), please complete questions 8-22.

8. Identify the main categories of SGARAs that your firm holds. For example, under a general SGARA type of livestock, the firm may hold 2 categories of cattle - commercial breeding stock and trading stock.

1. _____	4. _____
2. _____	5. _____
3. _____	6. _____

Complete questions 9, 12 and 15 using the following KEY:

KEY	Measurement Method
A	Net market value of the asset in an active and liquid market.
B	Net market prices for similar or related assets.
C	Net market value of related assets.
D	Net present value of expected cash flows from the SGARA discounted at a current market-determined rate, which reflects the risks associated with those assets.
E	Cost.
F	Independent valuation.
G	Director's valuation.
H	Other – please provide details in table.

NB: Where more than one measurement method is used for different components of the SGARA, please select all relevant methods

9. What are the current methods of measurement for the SGARAs, identified in question 8? *(Please state)*

Category of SGARA	Current Basis of Measurement under AASB 1037/AAS 35
<i>E.g. Breeding Stock</i>	<i>G, H – Net Realisable Value</i>
<i>Trading Stock</i>	<i>A</i>

10. If any of the current methods of measurement, are not net market value in an active and liquid market, why is this? *(Please tick)*

- ☐ There is no net market value available in an active and liquid market
☐ The firm has no information systems capable of tracking net market value
☐ Advised by industry experts that the method chosen is the most appropriate method to use for this SGARA type
☐ The method that is currently used is less onerous and simpler to apply
☐ Other, please specify;

11. Are these the same method(s) of measurement that have been applied since the standard was first implemented? *(Please tick)*

- ☐ YES
 ☐ NO

If you answered YES to this question, please skip to question 14.

12. What were the methods of measurement previously applied to these SGARAs? *(Please state)*

Category of SGARA	Previous Basis of Measurement under AASB 1037/AAS 35
<i>E.g. Breeding Stock</i>	<i>E for the 1st year, then G,H – Net Realisable Value</i>
<i>Trading Stock</i>	<i>E</i>

13. Why did your firm change measurement methods after the adoption of this standard? *(Please tick)*

- ☐ More in-depth understanding of the requirements of the standard
- ☐ The firm has developed information systems capable of tracking net market value
- ☐ Been advised by industry experts of the most appropriate method to use
- ☐ Changed to a method that was less onerous and simpler to apply
- ☐ Other, please specify;

14. Prior to the requirements of AASB 1037, did your firm account for SGARAs in its financial reports? *(Please tick)*

- ☐ YES ☐ NO

If you answered NO to this question, please skip to question 16.

15. What were the methods of measurement used by your firm PRIOR to the adoption of the standard?

Category of SGARA	Previous Basis of Measurement PRIOR to AASB 1037/AAS 35
<i>E.g. Breeding Stock</i>	<i>E</i>
<i>Trading Stock</i>	<i>E</i>

ACCOUNTING FOR SGARAs – INFORMATION SYSTEMS

16. The original operative date of AASB 1037/AAS 35 was deferred until financial years on or after 30 June 2001 to enable entities sufficient time to develop systems required to provide reliable information about the net market value of SGARAs (AASB 1037A/AAS 35A, Development of the Standard).

Did your firm develop systems capable of measuring net market value by the implementation date?

- ☐ YES ☐ NO

If you answered NO to this question, please skip to question 18.

17. Have the systems produced reliable information about the net market value of SGARAs? Please explain.

Please continue to question 20

18. Why did your firm choose not to develop such systems? *(Please tick)*

- ☐ An information system was already in place that adequately recorded the net market value of SGARAs
- ☐ The cost of developing the system was too excessive
- ☐ The costs involved in developing the system did not outweigh the perceived benefits
- ☐ There was not enough time to develop such a system before implementation date
- ☐ There was no technical expertise within the firm to develop such a system
- ☐ Other, please specify; _____

19. Since implementation date, has your firm developed a system capable of measuring net market value in an active and liquid market? *(Please tick)*

- ☐ YES ☐ NO

If you answered No to this question, why not? Please explain

ACCOUNTING FOR SGARAs – BASIS OF MEASUREMENT UNDER IAS 41

20. From 01 January 2005, as part of its international harmonisation program, Australia will adopt international standards. This includes the adoption of IAS 41 'Agriculture'. IAS 41 prescribes the accounting treatment, financial statement preparation and disclosure related to agricultural activity. Is your firm aware of IAS 41? *(Please tick)*

- ☐ YES ☐ NO

If you answered NO to this question, please skip to question 23.

21. Has your firm considered how IAS 41 will affect the accounting treatment of SGARAs? *(Please tick)*

- ☐ YES ☐ NO

If you answered NO to this question, please skip to question 23.

22. Using the KEY below, what basis of determining fair value would your firm expect to use under IAS 41 to measure SGARAs? *(Please state)*

KEY	Measurement Method
I	Market price of the asset in an active market.
J	The most recent market transaction price.
K	Market prices for similar or related assets.
L	Benchmarks applicable to that type of asset.
M	Net present value of expected cash flows from the asset discounted at a current market-determined pre-tax rate.
N	Cost.
O	Independent valuation.
P	Directors valuation.
Q	Other – please provide details in table.
R	It would not be possible to estimate fair value reliably.

Category of SGARA	Proposed Basis of Measurement under IAS 41
<i>E.g. Breeding Stock</i>	<i>O, M</i>
<i>Trading Stock</i>	<i>I</i>

23. Have you any other comments relating to the accounting treatment for SGARAs; specifically the stated aims of consistency and comparability? (If further space is required for comments, please attach an additional page).

Thank you for your participation in this questionnaire.
 Please return the questionnaire in the reply paid envelope provided.

Appendix Three : Interview Questions

1. What are the main SGARA types and categories that your firm holds?
2. What measurement method were you measuring your SGARAs under AASB 1037?
3. Why did your firm choose this measurement method?
4. If the measurement method your firm chose was the net present value method, why did you chose this method? From the questionnaire, it was found that firms with SGARA values over \$2M prefer to utilise this method compared to firms with lower SGARA values.
5. Has your firm applied these measurement methods consistently since the introduction of AASB 1037?
6. Does the type of SGARA that you hold have any influence on the measurement method that you chose to measure the SGARA?
7. Was there any influence from industry advocates to choose the measurement method your firm chose, eg manuals provided etc?
8. If your firm did not choose the net market method, why not? One of the main reasons from the survey as to why respondents did not use the net market method was that there was no net market available for their SGARAs.
9. Has your firm developed an information system to record SGARA values by implementation date? If so why, if not, why not?
10. Do you think consistency has been achieved through the implementation of AASB 1037?
11. Do you think comparability has been achieved through the implementation of AASB 1037?
(Eg comparability in valuation methods)
12. What amount of work was required to conform to the requirements of the international standard, AASB 141?
13. What things, if any, did you have to change in your accounting for SGARAs to meet the requirements of the international standard?

14. In meeting the requirements of AASB 141, ie fair value, did an active market exist for you to calculate the fair value of your firms biological asset?
15. Where it did not, how did you calculate the fair value?
16. Do you now value your agricultural assets differently under the international standard than how your firm valued under the SGARA standard? If so, how?
17. Did any of the assumptions for your valuations change?
18. Why did you choose the method that you have used under AASB 141? Did the type of SGARA that you hold have any influence on the measurement method you chose?
19. Was there any influence from industry advocates to choose the measurement method under AASB 141, eg manuals provided etc?
20. In your opinion, has the public developed have an understanding for accounting for SGARA (agricultural) assets over time?
21. In your opinion, was it the right decision of standard setters to comply with the international standard?
22. In your opinion, is it important that we have an internationally accepted set of accounting standards?
23. In a revised AASB 141, what changes, if any would you like to see?
24. Do you believe that consistency has been achieved through the implementation of AASB 141?
25. Do you believe that comparability has been achieved through the implementation of AASB 141?

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