The Institute of Foresters of Australia
National Conference

Managing our Forests into the 21st Century

7–11 April 2013
Canberra Rex Hotel, Canberra

International Valuation Standards Council,
41 Moorgate,
LONDON
EC2R 6PP, United Kingdom

Dear Sir,

Thank-you for the opportunity to provide comment on the Exposure Draft of *The Valuation of Forests* as published by the International Valuation Standards Council. The following comments are provided by the Association of Consulting Foresters of Australia (ACFA) and the Institute of Foresters of Australia (IFA)[1]. ACFA was established in 1978 to promote and protect the credibility and competence of Australia's consulting foresters to provide access to independent, objective and non-political assessments of current and proposed forest activities. Forestry consultants can be employed as individuals or may form part of a team drawing on expertise from a range of members. Full Members of ACFA are issued with a Registered Professional Forester (RPF(R)) Certificate which verifies their ongoing professional credentials. To be a member of ACFA you must meet the following criteria:

- Have RPF(R) accreditation (Accreditation as a Consultant is not required);
- Be a current IFA Voting member;
- Have at least 12 months consultancy experience;
- Agree to adhere to the ACFA Code of Ethics;
- Agree to adhere to the current *A standard for valuing commercial forests in Australia*.

To support our members in conducting valuations of forest assets, ACFA with support from Forest and Wood Products Australia (FWPA) has prepared *A standard for valuing commercial forests in Australia*[2] and a supporting comprehensive handbook[3]. The first version of *A standard for valuing commercial forests in Australia* was published in May 2004 and this document was made available on the web site. This document had been widely discussed with interested parties and especially with staff of the Australian Accounting Standards Board (AASB). With this first publicly released forest valuation standard it was anticipated that changes would be necessary within a relatively short period and such amendments have been made, particularly with reference to *AASB 141 Agriculture* (which is compliant with *IAS 141 Agriculture*). As noted, compliance with the ACFA valuation guide is mandatory for all members of ACFA. In accordance with the Exposure Draft requirements we have addressed the specific questions and in addition we have provided comment on specific points in the document.

We look forward to progress in this matter.

Yours sincerely

Rob de Fégely, IFA President

13 February 2013

[1] See http://www.consultingforesters.org.au/
[2] See http://www.consultingforesters.org.au/australian_standard-05.html
[3] See http://www.consultingforesters.org.au/HandbookV1.pdf

PO Box 7002 Yarralumla ACT 2600
Ph (02) 6281 3992 | Fax (02) 6281 4693
ifa@forestry.org.au | www.forestryconference.org.au
ABN 48 083 197 586

		TIP content	ACFA response
1		*The scope of this TIP is confined to the valuation forests held for the commercial production of timber and other forest products. It is intended to be applicable to valuations for a range of commercial and regulatory purposes but excludes valuations that are subject to national laws (e.g. taxation) or private contract (e.g. insurance). Do you consider that the principles discussed in this TIP could have wider application beyond the indicated scope? If so, please indicate the additional purposes to which the TIP could be applied.*	We believe that the TIP should direct what should be done **regardless** of national laws or private contract, although we note that national laws and private contract will take precedence. Further, it would be best if national laws and private contract adopted these principles. We have nil opinion nor experience to consider whether the principles have wider application apart from forest valuation. We note that the list in clause 2 is somewhat limited though.
2		*In para 15 it is indicated that discussion of techniques for the measurement and sampling of the tree crop (forest inventory) are outside the scope of this TIP but that there may be standards or guidance applicable in specific markets. The Board wishes to know if there is a predominant measurement and sampling approach that IVSC could reference as an example in this TIP, while recognising that variations may be applicable in certain jurisdictions or for certain species.*	
	i	*Please indicate your experience of different standards or techniques that are applied in preparing forest inventory, and the markets in which these are applied.*	In Australian there are no standards relevant to forest inventory and planning but there is a considerable body of literature and experience which can be called on. ACFA and IFA members more broadly have a broad range of experience in both in Australia and overseas. Inventory is not the critical issue but the application of growth modelling and planning that lead to the ability to predict future yields from a forest estate which will drive revenues.
	ii	*Do you believe that it would reduce diversity of valuation practice if the IVSC gave more information on common sampling and measurement techniques?*	It would not reduce diversity if IVSC gave more information on common sampling and measurement techniques because this TIP is at such a simplistic level that it could not provide appropriate guidance to cover the broad range of applications.
3		*The proposed guidance indicates at para 28 that all three approaches described in the IVS Framework are applicable to the valuation of forests. The discussion that follows indicates some of the strengths and weaknesses of methods under each approach in the context of valuing forestry interests. Please indicate which of the methods discussed you most commonly encounter in the valuation of forestry interests. If you encounter more than one on a regular basis please indicate whether there is clear tendency to use different methods under different circumstances, e.g.:*	
	i	*the stage of maturity of the tree crop*	Different methods of valuation can be used but the choice depends on what the valuation is to be used for e.g. the aim and needs of the client. For large forest estate sale purposes we believe DCF is the only way. For IAS41 valuation of the biological asset then a combination of DCF and costs can sometimes be considered appropriate although we would prefer DCF.
	ii	*whether the valuation is of a single stand or multiple stands*	The same techniques are required whether one is valuing a single stand or a forest, it is just that there are extra considerations if one is valuing a forest.

4		*The draft discusses the use of the market approach, income approach, and cost approach. Are there any other valuation approaches or methods used for valuing interests in forestry with which you are familiar? If so, please describe the method and the circumstances under which it is applied.*		There are nil alternatives that we are aware of.
5		*The Board is aware of some significant diversity in the length of the explicit forecast period that is used when using a discounted cash flow model to value a forestry interest. The proposed guidance has avoided giving specific guidance on the length of the period.*		
	i	*In your experience what is a typical range of forecast period for valuing forestry interests, and what criteria are used to determine how long this should be on a case by case basis?*		Our experience suggests that the projection period should be at least the nominal rotation length plus transition into the next rotation if this is appropriate as defined by the boundary of the valuation.
	ii	*Do you consider that it would be helpful for the IVSC to provide specific guidance on the length of the forecast period?*		The forecast period is very much set by the forest and the purpose of the valuation as defined by the clients needs and purpose. Any guidance cannot be mandatory. The fact that this TIP does not address the issues with the definition of the IASB term "biological asset" is of concern as there is a close relationship between planning period and prediction of the biological asset. The concept of using an infinite planning period is not adequately addressed.
6		*The discount rate to be used in a discounted cash flow is discussed in paras 45-49. This supplements the more detailed discussion of the DCF method in TIP 1. The Board has received evidence that in some parts of the world inappropriate reliance is being based on models such as the Capital Asset Pricing Model or the Weighted Average Cost of Capital where there is insufficient data to provide reliable evidence of either the risk premium or cost of equity that would be typical for a market participant. In order to address this issue the proposed guidance emphasises the need to give greatest weight to market based inputs. Do you agree with this guidance? If you have experience of how appropriate discount rates can be derived for use in a DCF of a forestry interest please indicate if this differs from the proposed guidance.*		The real issue is the terminal value and that is not in our view adequately covered in TIP 1 in terms of the long projection periods common in forest valuation. In many circumstances the immediate liquidation value at the terminal point is most appropriate, as it can at least be defined accurately.
7		*The proposed guidance in para 52 is that the cost approach is mostly applicable to recently planted forests because the physical and possible economic changes that occur as a forest matures mean that other methods become more reliable. The Board is aware that some argue that the cost approach cannot be applied to commercial forests under any circumstances and others argue that it can be reliably applied to mature forests. Please indicate if you agree with the proposed guidance on the applicability of the cost approach. If not please explain why by reference to practice in the markets with which you are familiar.*		Great care is required with the use of cost as a basis of valuation. Cost is of little use due a potential disconnect between costs and returns. A high cost forest can be worth far less than a low cost forest, it depends on so many business, environmental and other factors that are not part of the costs. See comment on land later.

8		*It has been reported to the Board that some valuations of forestry are being presented in financial statements prepared for statutory purposes that show significant changes from those previously submitted solely due to the adopted valuation method changing. The Board considers that this is contrary to the IVSs, in particular the definition and conceptual framework for market value, or where prepared under IAS 41, the requirements of IFRS 13 Fair Value Measurements. The method adopted should be that appropriate to achieve the required basis of value, it should not dictate or change the basis of value. The draft ED recommends in paras 55 – 58 the need to consider the use of more than one approach and the reconciliation of the results as means of avoiding a misrepresentation of the value by over reliance on a single approach, and the appearance that value can change simply because a different method is used.*		We agree that the massive changes in value year on year is contrary to the IVSC position, but what is not covered is how this is best handled. It is almost ignored in the IASB standards. It can also be distorted by land value changes that are not accurately brought to account. In Australia the rise and collapse of some Managed Investment Schemes changed the value of land due to such use as the H&BU with a capacity to pay higher prices in competition for suitable land.
	i	*Please indicate if you have encountered a similar problem to that described and, if so, any reason or justification given for the change in value?*		See the Productivity Commission Report from Australia (Attached) which shows how important the problem can be. In the Qld case the massive variation in the valuation brought to account was purely an accounting artefact to meet requirements of the Auditor General. There are many other examples in Australia, most of the details of which are held "corporate in confidence" so that they cannot be quoted publicly
	ii	*Do you consider that the guidance provided on the need to consider an alternative method in the Exposure Draft addresses this issue?*		No

9		*An interest in a forest can consist of the rights to the land, the tree crop and all other improvements to the land or it can be in only some of these components, e.g. the land only or the tree crop only. For most valuation purposes the benefits attaching to the subject interest, e.g. the right to receive certain cash flows can be readily identified. For valuations for financial reporting under the IFRSs a value has to be attributed to the "biological asset", i.e. the tree crop, regardless of whether the crop and the land are held in the same ownership. This can create difficulties where there is no direct evidence of the value of the tree crop only. The proposed guidance in para 71 refers to the suggested approach in IAS 41 which is that the value of the "raw land" be deducted from the value of the combined asset, with the residual representing the value of the biological asset. However, it is argued by some that this is over simplistic as the value of "raw land" is not the same as the value of land supporting a mature forest and the evidence the price of bare land ready for planting is of limited relevance.*		The "biological asset" is only part of the forest asset with which will be involved in usual circumstances. The ACFA's *"A standard for valuing Australian forests"* provides a way of separating out and rationalising the two values. So too does the NZ document supporting forest valuation. What is really needed is a consistent method for treating land, and that is almost totally missing from this TIP.
		Proponents of this view argue that the interdependence of the tree crop and the land mean that the land makes a significant contribution to the value of the tree crop, and therefore deducting only the value of the bare land from the value of the whole forest overstates the value of the biological asset. Please indicate if you have experience of a separate value being ascribed to the "biological asset" in a forest for financial reporting purposes and, if so, the method or methods that you are most familiar with to arrive at this value.		

10		*Para 71 refers to the guidance in IAS 41 that the value of the biological asset, in the case of forests the living trees, may be derived at by deducting the value of the land from the value of the value of the combined asset. It also points out the difficulty that arises if the land were worth more for an alternative use. The proposed TIP indicates that while this might suggest that the biological asset has a negative or zero value, if the trees will generate income to the entity when it is harvested then the biological asset will have a positive value and should be recognised as an asset regardless of the value of the land. Some disagree and argue that if the trees are preventing a more valuable alternative use then they can have no value. In the context of the requirement to ascribe a fair value to the biological asset as required by IAS 41, which of these views do you support?*		In our view the IAS 41 approach is of concern as it means the forest value can be distorted by land value changes. The challenge of alternative H&BU is actually more simple to control and work with for our members.

11		*The Illustrative Examples included with this draft are intended to illustrate the application of some of the principles discussed in this draft and in other IVSC pronouncements. They are deliberately simplified and are not designed to be applied to real life situations without modification to reflect the facts and circumstances.*		
	i	*Do you consider that these examples will be helpful in reducing diversity in practice?*		We consider that the examples add little or nothing and do not help reduce diversity in practice.
	ii	*Are there any other subjects that you consider would benefit from an illustrative example?*		Any examples have to at least be meaningful. ACFA had this challenge when preparing the Handbook to accompany *"A standard for valuing Australian forests"* . That handbook can be freely downloaded from www.forestry.org.au or by contacting the IFA via the same web address.

12		*The objectives of the TIP are set out at the beginning of the Exposure Draft.*		
	i	*Please indicate whether you believe that the draft meets these objectives. If you disagree please indicate why and how the guidance could be improved.*		This TIP meets the objectives set but does not meet the real objectives of improving forest valuation practices. The Australia and New Zealand should be considered as examples of more comprehensive guides and it is suggested that countries may follow the Australian and New Zealand example and own systems if the guidance provided by IVSC is not adequate or appropriate.
	ii	*Are there any additional matters that you believe should be addressed? If so please indicate what these are.*		See later comments: we believe that this TIP is at too simplistic a level to be truly useful. It is recognised that this is difficult for IVSC to address.

Section			TIP content		ACFA comments
Introduction and Scope					
1			*The objective of this TIP is to provide guidance on the main recognised approaches and methods that are used for valuing forests. In the context of this TIP forests consist of land and trees held for the growing and harvesting of forest products for commercial purposes. Forests that have no commercial value and that are held purely for social, amenity or private enjoyment are outside the scope of this paper.*		
2			*Valuations of forests are required for different purposes including:*		Experience of ACFA members indicate that there are other instances to consider including insurance, estate planning, and the comparison of alternative forest management strategies as vital functions requiring forest valuation.
			• *acquisitions, mergers and sales of businesses or parts of businesses;*		
			• *purchases, sales and leases of forest assets;*		
			• *reporting to tax authorities;*		
			• *litigation and insolvency proceedings and;*		
			• *financial reporting*		
3			*This TIP provides guidance on appropriate valuation procedures, approaches and methods for the valuation of forest assets. It does not examine any specific statutory or regulatory requirements that may apply to the valuation of forests for particular purposes in different jurisdictions, e.g. for taxation. Neither does it address valuations of forests under the terms of a private contract, e.g. a lease of rights or an insurance policy. Although some of the guidance may be applicable to such situations, it will be subject to any stipulations as to how value is defined or calculated in the relevant statute or contract.*		
4			*Where a valuation is required for inclusion in a financial statement the provisions of IVS 300 Valuations for Financial Reporting apply. IVS 300 also contains guidance on the principal valuation requirements under the International Financial Reporting Standards (IFRS), and this TIP includes some additional guidance that is specific to the valuation of forests under IAS 41 Agriculture.*		
Definitions					
5			*The following definitions apply in the context of this TIP. Similar words and terms may have alternative meanings in a different context. The IVSC's International Glossary of Valuation Terms provides a comprehensive list of defined words and terms commonly used in valuation, together with any alternative meanings. Cash Flow Cash that is generated over a period of time by an asset, group of assets, or business enterprise.*		
			Commercial Stock *A tree crop that is currently capable of harvesting to produce income.*		

			Cost Approach *A valuation approach based on the economic principle that a buyer will pay no more for an asset than the cost to obtain an asset of equal utility, whether by purchase or by construction.*		
			Discounted Cash Flow *A method within the income approach in which a discount rate is applied to future expected income streams to estimate the present value.*		
			Forest Trees and land used for growing and harvesting of trees for commercial purposes Forestry *The practice of growing and harvesting of timber for commercial purposes*		
			Forest Inventory *A statistical sampling of the timber volume and grade of each species in a particular stand of timber.*		Based on experience and the collective knowledge of the sector, forest inventory is more complex and important than the definition implies.
			Income Approach *A valuation approach that provides an indication of value by converting future cash flows to a single current capital value.*		
			Market Approach *A valuation approach which provides an indication of value by comparing the subject asset with identical or similar assets for which price information is available.*		
			Silviculture *The care and cultivation of the tree crop in a forest.*		
			Pre Commercial Stock *A tree crop that requires time to mature before it becomes Commercial Stock.*		
			Stand *A contiguous area of trees with trees of a similar species, silviculture and other characteristics.*		
			Terminal Value *The value at the end of an explicit forecast period of all remaining projected cash flows.*		

Identifying the Asset

6			*From planting until harvesting the land and the tree crop that comprise a forest are physically a single, indivisible item. However, for valuation purposes the asset is the interest, or rights, which a party holds in the forest. There are different types of interest and there may also be more than one interest in the same area of forest. The first step of any valuation is to identify the interest to be valued and the assets or activities within that interest that are to be included in the valuation, and clearly record this in the scope of work.*		

7			*IVS 230 Real Property Interests describes the principal different types of real property interest. An entity operating a forest may own the land and the tree crop in perpetuity or under a lease for a fixed period, and therefore will have a real property interest as defined in IVS 230. Alternatively the entity may have no interest in the real property at all, simply a right to cultivate and harvest the trees within a defined area.*		

8			*The relevant interest may be subject to contractual or statutory restrictions, e.g. obligations to replant or restore the land after the trees are harvested. There may also be conditions imposed that limit the operations or require the operator to provide access to third parties or the general public.*		

Valuation Considerations

9			*This TIP is concerned with the valuation of the rights to the land and trees that make up a forest. A business operating the forest may have other assets, e.g. plant and equipment, intangible assets, working capital etc that are used in conjunction with the land and tree crops. Although the valuation of these assets is outside the scope of this TIP, they may need to be separately valued depending on the purpose of the valuation. Another factor is whether there are any activities other than forestry that may need to be considered in the valuation.*		

10			*A valuation may be of a single stand or of an estate consisting of multiple stands. While the underlying principles are similar, the practical application may differ. These are discussed later in this paper.*		

11			*The following factors and their impact on value typically need consideration:*		The term applied in the Australian context is the compartment histories and this should be applied than “details and history of standing timber”. It would be prudent to include “forest inventory” as a factor as a separate item.
			• *Site, size and location,*		
			• *Details and history of standing timber,*		
			• *Potential silviculture strategies and projected growth rates,*		
			• *Production risks*		
			• *Rotation length*		
			• *Supply and demand for products.*		
			• *Other uses of the land.*		

12			*Especially in relation to the details and history of the standing timber the valuer may need to rely on data and information provided by either the party commissioning the valuation or a third party expert. The valuer should have sufficient knowledge of the forestry industry and its economics to be able to satisfy themselves that the information provided has been produced competently and objectively, and that it is appropriate to rely upon it in preparing the valuation.*		An important point is that some valuers do not have sufficient knowledge and this has led to some really inappropriate situations, which it is hoped that than any guidance would seek to avoid.

Site and location

13			*The proximity and means of access to the market for the timber that can be produced need to be considered. The location can also have a bearing on the suitability of the climate. The nature of the terrain can also have an impact on the micro climate of the site and its suitability for the crop, as well as affecting the cost of cultivation and harvesting. Soil quality is a further factor that impacts on value.*		

Forest Inventory

14			*Estimating the production potential of the site and the quantity, quality and growth rate of standing timber in a given area is a specialised task. For large stands of timber use is often made of aerial photography and remote sensing to determine the area and density for stands of different maturity, supported by statistically valid sampling strategies on the ground.*		In most cases stands would be assessed using remote sensing as part of an overall set of tools used in valuation. Care is needed to separate the term of forest and individual stands of trees (compartments). For example a company has >100,000 ha of forest but the average stand size is <20 ha. A stand (or a compartment or a coupe) has a fairly specific definition that is clearly recognised around the world even though the name may change.
15			*Detailed discussion of different sampling or measurement techniques is beyond the scope of the TIP. The techniques used can vary between different countries and species. In the established forestry markets there are often published standards or recommended practice for measuring standing timber.*		
16			*Other factors that typically need to be investigated or considered include:*		Why are costs and returns not mentioned, after all they are the components critical to value?
			• *species,*		
			• *seed/genetic source,*		
			• *year of establishment or regeneration treatment,*		
			• *initial stocking,*		
			• *fertiliser and weedicide treatments,*		
			• *history of pruning or thinning,*		
			• *insect and disease attacks and treatments,*		
			• *effect of previous fires, flooding and storms.*		
			• *growth, mortality and removals,*		
			• *planned or potential future silviculture,*		
			• *wildlife management.*		
17			*Some of these apply only to planted forests, others to both natural and planted forests.*		
18			*Differences in silviculture or felling practices can lead to differences in the log yields or qualities of particular sizes from otherwise identical stands. Previous silviculture practice will be reflected in the current inventory but the potential for alternative future silviculture regimes in the future and their impact on yield should be considered. Variations in the tree form caused by genetic or environmental differences may mean that trees of the same dimensions at the base yield different volumes of particular log sizes or qualities.*		

Time to maturity

19			*The date on which a crop of trees reaches maturity and is ready for harvesting is less likely to reflect the anticipated biological maturity than the date of optimum financial maturity. Many species of tree can grow to a very old age, but due to the increasing risks and diminishing returns, financial maturity is most always reached considerably earlier. Financial maturity is a dynamic concept because it depends on shifting market demand, and needs to be determined as of the effective valuation date.*		The use of the term maturity doesn't make much forestry sense. We think IVSC mean it in terms of clear felling at the end of a rotation but before that there can be a number of commercial thinnings which can also be considered maturity for those trees.
		Estimating Wood Flows			
20			*To forecast future wood flows from the current inventory of living trees account needs to be taken of expected silviculture, growth rates and mortality. For common species biometricians have developed growth models. Professional judgement is needed in order to apply these models to a specific forest or stand.*		
21			*An understanding and investigation of the demand patterns for the timber products that will be produced is crucial for both the analysis of data used in the valuation and in developing the valuation opinion. Forecasting wood flows for medium and large forests involves matching timber production to the likely market demand. The latter may be estimated using either contracts for the supply of timber or an assessment of trends in demand.*		The linkages between production and demand must be considered in the valuation process. It is not always possible for a forest to meet the demand placed upon it.
22			*A commercial forest may have a number of different potential product lines from the same species. The market and market dynamics for these needs to be investigated in order to determine the product, or combination of products that would provide the optimal financial return. This TIP is concerned with the valuation of forests, not with the value of processed products, e.g. sawn or pulped timber. However, the demand for, and price of, these products will significantly impact on the value of forests, and a forest specific product price analysis is an important input to the valuation process.*		
23			*Common bases for making price comparisons are either the "stumpage price" or the "mill door" price, which are often expressed as a price per m3, per cubic foot or in "board feet." Stumpage is the price that a buyer would be prepared to pay for the standing timber, on the understanding that the buyer was responsible for felling and transportation. Mill door is the price that a processor of timber products will pay for logs delivered to the mill. To value standing timber using mill door data the estimated costs of harvesting and transportation from the forest to the mill have to be deducted.*		The language used must be consistent with the local / national context of any terms used.
24			*For large stands , the rate of market absorption also needs careful consideration, e.g. if the crop in the anticipated year of maturity is significant in relation to demand there could be an adverse impact on the price unless the release of the crop can be phased to match demand.*		H&BU considerations only apply if contracts allow them to apply. It cannot be a blanket statement that market value reflects H&BU.
		Other Uses			

25			*Market value reflects the highest and best use of an asset. Land within a forest may have a higher value for an alternative use, meaning that to realise that value the forest use would have to be discontinued, or the highest value may come from a combination of complementary uses that can coexist with the forestry activity.*		
26			*An alternative use would preclude the use of the whole or part of the land for forestry. Typical examples include mining, agriculture or building development. For the highest and best use of land to be for an activity other than forestry that use has to be physically possible, legally permissible and financially feasible. For example, it may be known that there are potentially valuable minerals in the land beneath a forest, but their presence would only affect the market value if there were no undue technical restraints on extraction, if there was a realistic prospect of obtaining the necessary legal permissions for extraction and if the net return would be greater than continuing the forestry use.*		The fourth word “would” should be “could”. Such an effect is not always so.
27			*Examples of complementary uses that may provide additional economic benefits to the owner of an interest in a forest include rights to harvest berries or fungi, to hunt wild animals or other sporting or recreational activities. Some types of complementary use may have an impact on the silviculture and therefore the timber yield, and this needs to be taken into account when determining which use, or combination of uses will generate the highest return.*		

Valuation Approaches and Methods

28			*The three principal valuation approaches identified in the IVS Framework can all be applied to the valuation of forests. The IVS Framework also explains that the choice of the most appropriate approach, or approaches, will depend on the purpose for which the valuation is required, which in turn determines the required basis of value. The required basis of value will determine the inputs that are relevant, which in turn will influence the choice of approach or method.*		
29			*The main methods within each approach that are applied to the valuation of forests are discussed in this TIP. However, the fact that a method is not mentioned does not mean that its use may not be appropriate for the valuation of forests under certain circumstances.*		
30			*A common factor to all approaches and methods used to value forests is the need to reflect the fact that trees mature over time and that the effect of different states of maturity will need to be reflected in whatever method is selected.*		

31		*Market Approach*	*Due the heterogeneous nature of forests, direct comparison with sales of other forests interests is rarely possible. However sales analysis and adjustments can be an important valuation tool. Sales adjustments based on ratio analysis can frequently be applied for indirect sales comparison purposes. Market analysis can often help isolate relevant elements of value, or determine a useful unit of comparison. However, the usefulness of any analysis will depend upon the extent of the information that can be obtained about the factors that influenced the price paid, such as the relative maturity of the tree crop and all the other factors discussed in paras 10-24 of this TIP.*		It is not just heterogeneity of the forest. There may be very similar forests available for comparison, homogeneous between sales and the forest being considered, but other factors may mean that sales comparisons are at best fraught.
32			*A previous transaction involving the subject forest may also provide useful information if the circumstances of the transaction were similar to those to be assumed in the current valuation and that adjustments can be made to reflect price changes for timber products and changes to the stand over the intervening period.*		
33			*The market approach is generally most applicable to the valuation of an absolute ownership interest in the land and the tree crop combined. Although it can be used to value partial interests in a forest, e.g. the ownership interest in the land and or the rights to the tree crop, its reliability in these circumstances will depend upon the extent of the information that is available about rights and obligations of the interest involved in the potentially comparable transactions.*		

Income Approach

34			*Because the timing of income from forests is usually different from the timing of costs incurred in the cultivation, maintenance and protection of the crop, a discounted cash flow method (DCF) is frequently used. TIP 1 Discounted Cash Flow3 describes the application of the DCF method to businesses and investment property, but the same principles can also be applied to forests, including those that should be applied when forecasting cash flows and selecting an appropriate discount rate.*		
35			*Both the projected cash flows and the discount rate adopted should reflect the required valuation basis. Where market value, or a similar basis such as IFRS Fair Value, is required, the inputs should be based on those of a typical market participant. Consequently any costs or revenues predicted by the current owner should be checked to see if these are consistent with market expectations, and the discount rate used should reflect a market rate, not the owner's expectations. Conversely if the purpose of the valuation is to determine the value of an asset to a specific entity, it would be appropriate to use inputs such as the entity's target rate of return.*		This clause is just too simplistic to be useful. Part of the issue is that the projection period needs to be long so that there can be a reasonable estimate of the terminal value. Very long projections are necessary to confirm sustainability. ACFA believes that while TIP 1 is great it does not address the needs of forest valuation, especially in terms of terminal value. That should explicitly be addressed in this TIP.

36			*The DCF method requires a period for which future cash flows are explicitly forecast (the explicit forecast period) and an estimated terminal value. The length of the explicit forecast period will depend on the extent of the fluctuations in the expected cash flows and the certainty with which their timing can be predicted. The effect of an explicit forecast on the present value diminishes over time due to the effect of discounting. The value of cash flows beyond the end of the explicit forecast period is reflected in the terminal value.*		There is a good argument to be made that the projection period should be 0 or ∞. Otherwise it is more tricky to incorporate land into the analysis. Well it is easy enough to put in a land lease value but what is the terminal value 30 years out of this land lease value? This whole subject of land value is not well considered in this TIP. The TIP does not resolve the issues at all.
37			*Because the principal income from forests arises at the maturity of the crop which may be many years in the future the explicit forecast period is often longer for forests than for other types of asset. When used to indicate market value, the length of the forecast period used should reflect that typically used by market participants.*		
38			*Cash outflows might typically include the costs of establishment, cultivation, protection and maintenance over the period until each stand is harvested. Some forests and plantations, especially publicly owned native forests, where there are complementary activities, the cost of infrastructure such as fire protection and roads may be apportioned among the different activities.*		This does not allow multiple harvests such as commercial thinnings. A commercial thinning is a harvest so even with the IASB definitions there can be a number of harvests in the analysis. There are two similar components, cost to date of valuation and projected costs to the end of the planning horizon. The blithe statement that the value of the cash flows after the forecast period is reflected in the terminal value ignores the challenges of determining that terminal value. That is one reason why ACFA prefers far longer periods than a certified professional valuer would use. The shorter period is a head in the sand approach. It is reasonable in theory to apportion costs between activities however if they are all paid for by the same organisation then there is no effect and if they are paid for by different organisations then experience suggests is that copayment is very difficult to obtain. This clause is rather simplistic.
39			*The cash inflows might typically involve calculation of the stumpage price for either the whole forest or for each individual stand, together with estimation of the date on which harvesting is expected. If the price of timber products, e.g. sawn logs delivered to the customer, is used as a basis for revenue forecasts rather than the stumpage price then care must be taken to ensure that the associated costs of harvest, overhead, delivery, administration and time are also reflected in the cash out flows.*		
40			*Large forests and plantations are typically managed to sustain timber flows over time, and therefore the cash flows should take into account not only the tree crop at the valuation date but also replanting (rotations) scheduled within the forecast period.*		Needs to state that this is inconsistent with IAS 41 and the whole IASB approach of "biological asset".
41			*If a DCF method is being used to value only the tree crop, the cash flows will need to include an appropriate outflow for the contribution of the land and other assets. Depending on the interest being valued and what is to be included, adjustments may need to be made to projected cash flows to represent the contribution of infrastructure improvements to the land, for example access roads and irrigation systems.*		ACFA agrees, but the treatment of land in the valuation is not simple and is commonly mismanaged. We prefer to use a notional or actual land lease value as we believe that it is the only consistent method.

42			*In cases where the land is leased to the forestry operator the amount or basis of computation of the rent will normally be in the lease contract. However, in other cases it may be necessary to estimate a rental value for the land by using the market approach to analyse rents agreed for other land used for comparable forestry activities or by the return that a market participant would require on the capital cost of acquiring such land. Where there is market data for land that has comparable infrastructure in place then it may be possible to calculate a notional rent for the improved land, but where the evidence is of bare land a further allowance will need to be made for the contribution of infrastructure. One approach is to measure the value of infrastructure by reference to the cost savings it provides for future forestry operations.*		
43			*The contribution towards the cash flows from other assets, e.g. the plant and equipment used in the felling, sawing and transportation should also be considered and adjustments made as necessary to exclude this contribution if those assets are not to be included in the valuation. Depending on the interest being valued and what is to be included, adjustments may need to be made to projected cash flows to represent the contribution of infrastructure improvements to the land, for example access roads and irrigation systems. Sometimes it is possible to measure the value of these by reference to the cost savings they provide for future operations.*		
44			*The terminal value will need to reflect the value of the pre commercial and commercial stock estimated as at the end of the forecast period, as well as the residual value in the land. The value of stands that will have been harvested at the end of the forecast period may reflect the potential for replanting, or for an alternative use. Adjustments may also be required to the terminal value to reflect any restoration obligations.*		What do you mean by commercial and pre-commercial? It is simply the value of the stock. ACFA believe that the segregation is meaningless.
45			*TIP 1 indicates that for business valuation the convention is to use a discount rate based on either the cost of equity calculated using one of the variations of the capital asset pricing model (CAPM) or the weighted average cost of capital (WACC). Both are intended to reflect the return that would be required by a market participant. These techniques can be applied to the estimate the market value of forests if there is sufficient market data on the cost of equity for a typical buyer of the type of forestry under consideration. Note that this is not necessarily the same as the cost of equity for the current or any specific prospective owner.*		Why only WACC? Why not CAPM and other approaches? Why say “required by a market participant” surely it is “desired” and then only by some market participants.
46			*TIP 1 indicates that for investment property it is the convention to use a rate derived from analysis of market transactions, or when there is insufficient market data to reliably determine a discount rate, a rate may be estimated using a “build up” method. These techniques can also be used to determine a discount rate for forests.*		ACFA would prefer to see the IASB approach of “document, detail and disclose” incorporated here. The essential thing is to know how the rate was determined.

47			*Because the market for forests is not as deep or as liquid as for some other asset classes there will typically be fewer sources of information on transactions or investor expectations. However, market transactions may be analysed in order to derive the discount rate implied by the price paid. A cash flow is estimated for each of the comparable transactions that are being considered. The implied discount rate is the rate at which the transaction price matches the attributed cash flows.*		Needs to be hedged, i.e. "... the market for forests is **generally** not as deep or liquid..." One can argue that in Scandinavia the market for small woodlots is deep and liquid.
48			*If an appropriate discount rate cannot be directly observed in the market, a build-up method may be used. However, where the required basis is market value caution is required to ensure that the different components of risk associated with the forest investment are identified so that valid comparisons can be made with the market pricing of equivalent risks for which information is available. The risks should also be relevant to the forecasted cash flows. Whenever a build-up approach is used, care should be taken to ensure that the discount rate derived from the various risk components is credible in comparison with rates that are observable in the market for investments having a similar or equivalent risk profile, or by cross checking the valuation result by using a different valuation approach.*		
49			*. Risks to be associated with forests include environmental, biological and economic risks. Some risks associated with forests will fluctuate depending on the stage of the rotation on the valuation date. The risk associated with a newly planted forest is often highest in the early years up until the first commercial thinning. Each subsequent thinning ameliorates the risk as the number of trees per hectare reduces over the rotation and as the tree size increases.*		Financial risk should be included and it has been omitted. ACFA would argue that part of the risk SHOULD NOT be built into the discount rate but modelled explicitly. The problem is that few people recognise this and this risk is very rarely considered explicitly rather than implicitly. Few are prepared to undertake the necessary stochastic modelling.
50			*Although the DCF method allows for future cash flows to be modelled to reflect expected maturity dates and rotations within a forest, the results are sensitive to the key input assumptions made. It is prudent to check the effect on the present value of different input assumptions such as the project quantity of timber that might be produced and sold in a given period, the assumed length of rotation and the discount rate adopted, and if necessary undertake a sensitivity analysis before reaching the valuation conclusion.*		Perhaps the use of sensitivity analysis and stochastic modelling should be mentioned here.
51		*Cost approach*	*TIP 2 The Cost Approach for Tangible Assets gives guidance on the application of cost approach to real property and these principles can be applied to forests. The cost approach provides an indication of value by calculating the current replacement cost of an asset and making deductions for physical deterioration and all other relevant forms of obsolescence. It is based on the principle of substitution, i.e. that unless undue time, inconvenience, risk or other factors are involved, the price that a buyer in the market would pay for the asset being valued would not be more than the cost to assemble or construct an equivalent asset.*		Para 51 - time is at the heart of the problem. Replacement costs can be estimated but are they relevant? They may be but if the forest is replaced then the future harvest will be delayed by years and that affects future incomes. It has to be considered in a whole of forest analysis not simply on a stand basis. Replacement is basically inappropriate. ACFA prefers to use a DCF and never use a cost approach. The TIP makes the land aspect more complicated than it need be too. These paragraphs try to adapt the concept of a cost approach from other areas to a forestry context and fails to address the forestry situation adequately. Para 56 Comments on the economic obsolescence that can arise when the target market changes. To a forester this is normal not abnormal. Based on 130+ years of

52			*The cost approach is most applicable to recently planted forests, where the cost of creating an equivalent asset may be able to be judged with a reasonable degree of certainty. In the case of young trees, buyers and sellers are likely to give more weight to the current cost of planting on the valuation date and the opportunity cost of the time required for a new plant to grow to the age of plants under consideration than to the expected cash flow on harvest. Typical costs that would be considered include:*		plantation experience the target market at establishment is rarely, if ever, the target market at clear felling. The better objective is not to base silviculture on any specific current market but to aim for a flexible forest that at clear felling will be appropriate for a wide range of possible markets. Markets change quicker than the forest can grow.
			• *the cost of acquiring suitable land for planting (assuming the interest being valued includes land),*		
			• *the cost of infrastructure,*		
			• *the cost of cultivation and preparation,*		
			• *the cost of buying and planting and establishing the young trees,*		
			• *any unrecoverable taxes that would be incurred in creating the above.*		
53			*The cost approach is generally less applicable to established forests because not only is it more difficult to establish the cost of an equivalent but it may not even be possible to create an equivalent because of the time required for the tree crop to reach the same stage of maturity.*		
54			*When applying the cost approach, the value attributable to the land can be a significant component of the overall value of the forest, especially where the plants or trees are young. If the planting is recent there may be other recent transactions involving bare land that is comparable to the subject land before it was planted to provide good evidence of what equivalent land suitable for planting would cost to acquire at the valuation date. However, for more mature forests neither land available for first time planting nor land available for replanting after harvesting would provide a direct equivalent. While adjustments may be made to transaction evidence of bare or cleared land to reflect the utility of the subject land, these are not likely to be supportable by observable evidence in the market and will involve greater subjectivity*		
55			*When applying the cost approach the actual costs incurred by the owner of the forest in its development, planting and silviculture may be a useful indication of the cost of an asset offering equivalent utility on the valuation date, especially where these have been recently incurred. However, any actual costs incurred will still need to be carefully considered to determine whether a market participant would still purchase an identical asset at the valuation date or whether economic or technological changes mean that either an alternative would be purchased or the investment not made at all. Any historic cost that is considered to be a relevant indicator of current value will also need adjusting to reflect price changes between the date on which was incurred and the valuation date.*		

56			*Notwithstanding the fact that the trees will normally be expect to grow and therefore appreciate in value, it is still necessary to consider whether obsolescence adjustments may be appropriate. Physical obsolescence may occur if disease has affected the tree crop and the anticipated yield. Economic obsolescence can arise where there has been a change in the original target market for the timber that has permanently diminished demand or where costs were incurred that were only justified by tax incentives available on initial planting that would not be available to a subsequent purchaser. Obsolescence adjustments will also need to be considered for infrastructure such as roads, buildings and fencing. TIP 2 gives further guidance on identifying and measuring different types of obsolescence.*		
		Use of Multiple Approaches			
57			*Given the heterogeneous nature of forests and the fact that all three principal valuation approaches have shortcomings in different situations as discussed in the preceding sections of this paper, wherever the data is available it is prudent to use more than one approach so that the results can be compared and any major differences considered and reconciled. IVS 102 Implementation provides that more than one valuation approach or method may be used to arrive at an indication of value, especially where there are insufficient factual or observable inputs for a single method to produce a reliable conclusion. When this is done the resulting indications of value should be analysed and reconciled to reach the valuation conclusion. Reconciliation of differing results from different approaches enables the valuer to better understand the critical inputs of different methods and ensure that these are as realistic as possible.*		Not all forests are heterogeneous. We believe that the IVSC perception of the difficulty of long projection periods is simply lack of experience and understanding. ACFA agrees that multiple approaches may be appropriate but doubt that they are when valuing a large commercial forest estate and this is supported from recent evidence about how both vendor and bidder valued a large plantation forest.
58			*All the main valuation approaches may be used to determine different bases of value. As explained in the IVS Framework4 the inputs should be adjusted to be consistent with the required basis, e.g. where the required basis is market value or another market based definition such as IFRS Fair Value, the inputs under any approach adopted should be based on market evidence or the expectations of market participants.*		
59			*For example, the cost approach may be considered the most appropriate approach to value young, newly planted trees for the reasons explained in para 52. However, a buyer would only incur these costs in expectation of future returns and even though the cash inflows from the crop may be relatively distant and therefore the present value highly sensitive to small changes in the discount rate, it is often prudent to undertake a simplified DCF analysis to check that the conclusion under the cost approach falls within a range that would give a return that would be regarded as reasonable by both buyers and sellers in the market place. Likewise, because of the sensitivity of the DCF method*		

60			*to different assumptions about periods to maturity, future sales volumes and the way in which the discount rate is derived, a cross check of the net present value produced with an analysis of any available transaction evidence, even if this is deemed insufficiently relevant or reliable to rely on as the primary approach, will help ensure that the valuation conclusion is more robust.*		
			It is common practice for the preferred valuation approach to change as a forest matures due to physical and economic changes. However, a change in the approach or method used is not of itself justification for a change in value. Using different approaches as a cross check to help validate the result of the preferred approach will help avoid errors of this nature. Careful cross checking and reconciliation will help ensure that the method given most weight is the one that market participants would use in order to price the forest in an exchange.		

Unit of Valuation

61			*As has been discussed forests and interests in forests can consist of just the land, just the tree crop, both land and trees and may or may not include the rights to complementary or alternative uses. A forest can also consist of a single stand or multiple stands. The "unit of valuation" is the level at which the individual assets or components of an asset are aggregated for the purpose of the valuation. The unit of valuation will be dependent upon the purpose for which the valuation is required, and the unit of valuation will affect the decision as to the most appropriate valuation approach.*		

62			*. For example the cost approach might be deemed the most appropriate to estimate the value of a single stand of young trees, where the stand is the unit of valuation. A single stand of trees approaching maturity might be most appropriately valued using the market approach. However, the value of a single stand valued as such and the value of the same or a similar stand as part of a larger forest containing many stands of different species, ages, terrain and silviculture managed will not necessarily be the same. Where the unit of valuation is a forest with multiple stands managed as a single estate the yield of individual stands might be regulated in order to produce a better balanced long term cash flow for the whole estate. The most appropriate method for the entire estate may well be different from that for individual stands.*		For a single stand we would generally not use the cost approach nor would we rely solely on the market approach either unless we can get the time implications right. The issue is that the market is cyclical and changes within a relatively short time. This is far shorter than the usual planning horizon for a forest based DCF. The market before the GFC, in the two years after, and right now, are completely different. A forest owner may well decide to change his management perspective and not consider selling until the market cycles into an upturn, or the owner may react to a particular opportunity that presents itself. A market approach is obviously the way to go if it is imperative to sell and sell right now, but the same market approach is far less relevant if the owner has the opportunity to hold the investment and sell in 10 years time.

63			*It also follows that the value of a forest containing multiple stands is unlikely to be the aggregate of the value of the individual stands. The unit of valuation is also relevant in determining the highest and best use of a forest. For example, an individual stand may have a highest and best use other than forestry, but if it is being valued as part of a larger forest, its contribution to maximising the returns from the entire forest may outweigh the additional value of the alternative use.*		

Value of Land

64			*in the land element of a forest may be in different ownership to the rights to the tree crop (see para 6). Where the owner of land has granted rights to a counter party to plant and harvest trees this will normally be by way of a lease or similar instrument for a fixed period. The rental payments under the lease may be for a fixed amount or variable. If the latter it is necessary to consider the criteria for variation, how these would be viewed by a market participant at the valuation date and the impact on the value. It is also necessary to consider whether the lease length aligns with the expected rotation of the tree crop, and the implications of any mismatch. The present value of the land and any improvements that will remain at the end of the lease should also be considered. (see also paras 25-27 on alternative uses.*		
		The interest			
65			*Where the land and the tree crop are in the same ownership, it may still be necessary to consider the value of the trees separately, for example if valuing for financial reporting purposes under IAS 41, see below. As discussed in paras 41-42 the contributory value of the land may be based on the evidence of actual rents paid for land leased for forestry or a return on the price of buying land suitable for forestry adjusted as appropriate to reflect location and physical characteristics.*		
66			*Where value is being placed on the land and any improvements or complementary uses solely for the purpose of establishing an allocation of the overall value of the forest attributable to the tree crop, the assumptions made in valuing each component should be consistent with one another. For example, if the highest and best use of the whole interest being valued was for forestry, it would be inappropriate to value the land or improvements on the assumption of an alternative use.*		
		Valuation for Financial Reporting			
67			*IVS 300 Valuations for Financial Reporting is applicable to all valuations for this purpose regardless of the applicable accounting standards. The guidance section of IVS 300 discusses some specific valuation applications required under International Financial Reporting Standards (IFRS). This TIP provides guidance only on the specific valuation requirements for forest assets under IFRS. Other provisions may apply under different accounting standards*		
68			*Tree crops are accounted for under IAS 41 Agriculture which provides that "biological assets" shall be measured on initial recognition and at the end of each reporting period at fair value less costs to sell. Fair value under IFRS has to be determined in accordance with the provisions of IFRS 13 Fair Value Measurements. As explained in the Application Guidance to IVS 300, IFRS Fair Value is for most practical purposes the same as market value as defined and discussed in the IVS Framework.*		

69			*The biological asset is defined in IAS 41 as the living plant or animal. In the case of forests, a value therefore needs to be ascribed to the tree crop. This requirement can create difficulties in practice because of the need to exclude any element of value attributable to the land.*		There are real issues with the IASB definition of the biological asset that have not been resolved. ACFA had hoped that this TIP might go some way to pointing out just how crazy the definition is. We know IASB has been made aware of the issues but we suspect they consider them too hard. Land is definitely part of the issue but in our opinion not the main challenge. IASB do not want to countenance the future crop issues that are at the heart of the difficulty. In the Australian forest valuation standard we fall back on suggestions and the "document, detail and disclose" approach and recommend common sense prevails. If IVSC could at the very least start a dialogue then it would assist this TIP gain some credibility.
70			*In some markets there may be sufficient grants and transactions of rights to plant, grow and harvest timber that are separate from the land in order to value the tree crop directly. However, in others there can be little evidence other than the sale of land and trees together.*		
71			*One approach suggested by IAS 41 is to take the value of the entire forest and deduct from this the value of bare land suitable for planting and any other improvements, such as road, structures, irrigation systems etc, in order to arrive at a residual value for the tree crop. Difficulties can arise with this approach if the land in question has a value for an alternative use that is higher than that for forestry, which could, in some cases, result in the biological asset appearing to have a negative value. Providing the trees could still be harvested and provide a cash return to the operator then the biological asset has value and should not be measured at zero or a negative amount for accounting purposes. A more valuable alternative use might shorten the time horizon for harvesting the tree crop but the biological asset could still be valued based on the net present value of the expected income from that crop whenever it is harvested.*		This IAS41 optional approach is simply ludicrous in many cases. Unfortunately the approach can provide valuations that are not consistent year on year, can provide nonsensical changes to the P&L, changes that cannot be realised and so, one could argue, should probably not be brought to account. That does not assist add certainty to the valuation of the asset class. Again it is not just the land issue, but that is one major component. This clause simply reflects the problems with the IASB approach. We believe that should at least be stated or discussed.
72			*The land element of a forest is accounted for under IAS 16 Property Plant and Equipment. An entity initially accounts for land at its cost but after initial recognition may use either the cost model or the revaluation model.*		The land issues are major.
			• *Under the cost model land is carried at its cost less any accumulated depreciation and any accumulated impairment losses. (but see para 73 below)*		
			• *Under the revaluation model land is carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end*		
			• *of the reporting period*		

73			*Under IAS 16 land is only depreciated if it has a limited useful life to the entity. In the case of forestry this might arise if there is no right to replant following the harvesting of the current tree crop and the owning entity has an obligation to restore the land to an alternative less valuable use.*		
74			*The "cost model" in IAS 16 should not be confused with the "cost approach" discussed in this TIP. The latter is a technique that may be applicable to estimate the fair value under the revaluation model. It should also be noted that while the biological asset, i.e. the tree crop is required to be revalued under IAS 41, the land on which that asset lies may be carried at historic cost less impairment or at fair value. Therefore there is not necessarily any correlation between the carrying amount of the tree crop and the land on which it is growing.*		Which makes the books look rather strange and can create real interpretation problems. This can create a real problem if the market value or fair value of the combined asset is what needs to be assessed.
75			*The Application Guidance in IVS 300 discusses the valuation requirements for measuring depreciation and impairment*		
76			*References to accounting requirements in this paper are subject to the provisions of the relevant IFRS and in the event of a conflict between this guidance and the IFRS, the IFRS prevails. Although similar requirements may exist in other Financial Reporting Standards, IVSC makes no assertion as to the relevance of this guidance to such standards.*		
		Scope of Work and Reporting			
77			*IVS 101 Scope of Work and IVS 103 Reporting set forth matters to be addressed in preparing and reporting any valuation under the IVSs. IVS 230 Real Property Interests provides specific examples of maters that should be included when preparing the scope of work or a report on the value of real property. These provisions are applicable to the valuation of forestry. This TIP includes supplementary guidance to illustrate matters that might typically be address when undertaking a valuation of forestry.*		
78			*The extent of investigations (IVS 101 2(g) and IVS 103 5(g)), and The nature and source of information relied upon (IVS 101 2(h) and IVS103 5(h)) In order to comply with the above, the inspections and investigations to be undertaken, or that have been undertaken, in order to verify facts relied on in the valuation or steps that will be, or have been taken, in order to test the reasonableness of any assumptions made in the valuation have to be recorded in the scope of work and the report. For forest valuation matter that will typically need referencing include the source and other information on the forest inventory, any data used in yield forecasting and information of future cash flows if an income approach is being used. Where information provided by either the client or a third party expert is to be relied upon, the extent of the due diligence required of the valuer should also be recorded.5*		

79			*Valuation approach and reasoning (IVS 103 5(l)) If a DCF method is used, readers are referred to the guidance in TIP 1 Discounted Cash Flow paras 41-43 for appropriate disclosures under this heading.*		

		Illustrative examples			We consider that the example is too simplistic to be applied to a forest estate over about 50,000 ha. Why, in the second example, is the gross replacement cost changed from 3,250,000 to 3,200,000?