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THE INSTITUTE OF
CHARTERED ACCOUNTANTS OF SRI LANKA

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LKAS 41- Agriculture

Sanath Fernando
Partner –Ernst & Young

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Content

- Overview
- Exemption for bearer biological assets
- LKAS 41: Basic requirements
- Fundamentals of FV
- Practical issues

Setting the stage: Overview

- LKAS 41, Agriculture, effective for periods beginning on or after 1 January 2012, introduced fair value accounting for all biological assets.
- This entailed a major change from established accounting practices.
- The application of fair value to biological assets requires considerable judgment.

Exemption for bearer biological assets

Ruling on Bearer Biological Assets

Background:

With the application of Sri Lanka Accounting Standards converged with IFRSs with effect from 1 January, 2012, Sri Lanka Accounting Standard, LKAS 41 – Agriculture will be applied in the local context for fair valuation of biological assets and agricultural produce when they relate to agricultural activity.

International Accounting Standards Board (IASB) is reconsidering the fair value treatment for bearer biological assets, where it may allow preparers an option to measure bearer biological assets using LKAS 16.

Discussion:

In view of the IASB considering the granting of above mentioned option for bearer biological assets, Institute of Chartered Accountants of Sri Lanka has decided to grant a similar option to measure bearer biological assets (for example perennial crops such as tea, rubber and coconut ect.) under LKAS 16 – Property, Plant and Equipment.

Recommendation

- The preparers may measure bearer biological assets (for example perennial crops such as tea, rubber and coconut etc.) using LKAS 16 - Property, Plant and Equipment. However the preparers who wish to fair value bearer biological assets under LKAS 41 – Agriculture may continue to do so.

LKAS 41 - Agriculture is only applicable to managed agricultural activity thus does not allow preparers to fair value unmanaged trees in their plantations.

Scope

Scope

- LKAS 41 shall be applied to account for
  - Biological assets
    a living plant or animal
  - Agricultural produce at the point of harvest
    the harvested product of the entity's biological asset

Scope

LKAS 41		LKAS 2
Biological assets	Agricultural produce	Products that are the result of processing after harvest
Sheep	Wool	Yarn, carpet
Trees in a plantation forest	Logs	Lumber
Plants	Cotton	Thread, clothing
Dairy cattle	Milk	Cheese
Bushes	Leaf	Tea, cured tobacco
Vines	Grapes	Wine
Fruit trees	Picked fruit	Processed fruit

Scope…(contd.)

- **In other words: LKAS 41 applies only for Agricultural Activity**
- **Agricultural activity is the management by an entity of the biological transformation and harvest of biological assets for sale or for conversion into agricultural produce or into additional biological assets.**
  - **The activity should be capable of change**
  - **Change should be manageable**
  - **Change should be measurable**

Common features of agricultural activities

Feature	Remarks
Capability to change	Living animals and plants are capable of biological transformation
Management of change	Management facilitates biological transformation by enhancing, or at least stabilising, conditions necessary for the process to take place (for example, nutrient levels, moisture, temperature, fertility, and light). Harvesting from unmanaged sources (such as ocean fishing and deforestation) is not agricultural activity.
Measurement of change	The change in quality (for example, genetic merit, density, ripeness, fat cover, protein content, and fibre strength) or quantity (for example, progeny, weight, cubic metres, fibre length or diameter, and number of buds) brought about by biological transformation “or harvest” is measured and monitored as a routine management function.'

Agricultural Activity

- The standard states that 'agricultural activity' covers a wide range of activities, e.g.
  - raising livestock,
  - forestry,
  - annual or perennial cropping,
  - cultivating orchards and plantations,
  - floriculture, and
  - aquaculture (including fish farming)'.

Scope : Land and intangible assets

- This Standard does not apply to:

a) land related to agricultural activity (see LKAS 16 Property, Plant and Equipment and LKAS 40 Investment Property); and

a) intangible assets related to agricultural activity (see LKAS 38 Intangible Assets).

Scope :Biological assets outside the scope of LKAS 41

- **Biological assets may be outside the scope of LKAS 41 when they are not used in an agricultural activity.**
  - animals in a zoo (or game park) that does not have an active breeding programme and rarely sells any animals or animal products would be outside the scope of the standard.
  - activities in the pharmaceutical industry that involve the culture of bacteria. Such activity would not fall within the scope of LKAS 41. While the bacteria may be considered a biological asset, the development of a culture by pharmaceutical company would not constitute agricultural activity.
- **Biological assets outside the scope of LKAS 41 will fall normally within the scope of either LKAS 16 or LKAS 2 – Inventories.**

Scope: Agricultural produce before and after harvest

- **LKAS 41 only applies to agricultural produce (i.e. harvested crops) at the point of harvest and not prior or subsequent to harvest.)**
  - Unharvested agricultural produce is considered to be part of the biological asset from which it will be harvested. Therefore, before harvest, agricultural produce should not be accounted for separately from the biological asset it comes from.
    - grapes on the vine should be accounted for as part of the vines themselves right up to the point of harvest.
  - **Subsequent to harvest agricultural produce is accounted for under LKAS 2. The inventory is initially recognised at the fair value determined under LKAS 41, which becomes its cost for LKAS 2 purposes**

Scope: Products that are the result of processing after harvest

- **LKAS 41 does not deal with the processing of agricultural produce after harvest, even when such 'processing may be a logical and natural extension of agricultural activity, and the events taking place may bear some similarity to biological transformation, such processing is not included within the definition of agricultural activity .**
  - the processing of grapes into wine
  - a process in which yeast (a fungus) converts sugars into alcohol
  - cheese production

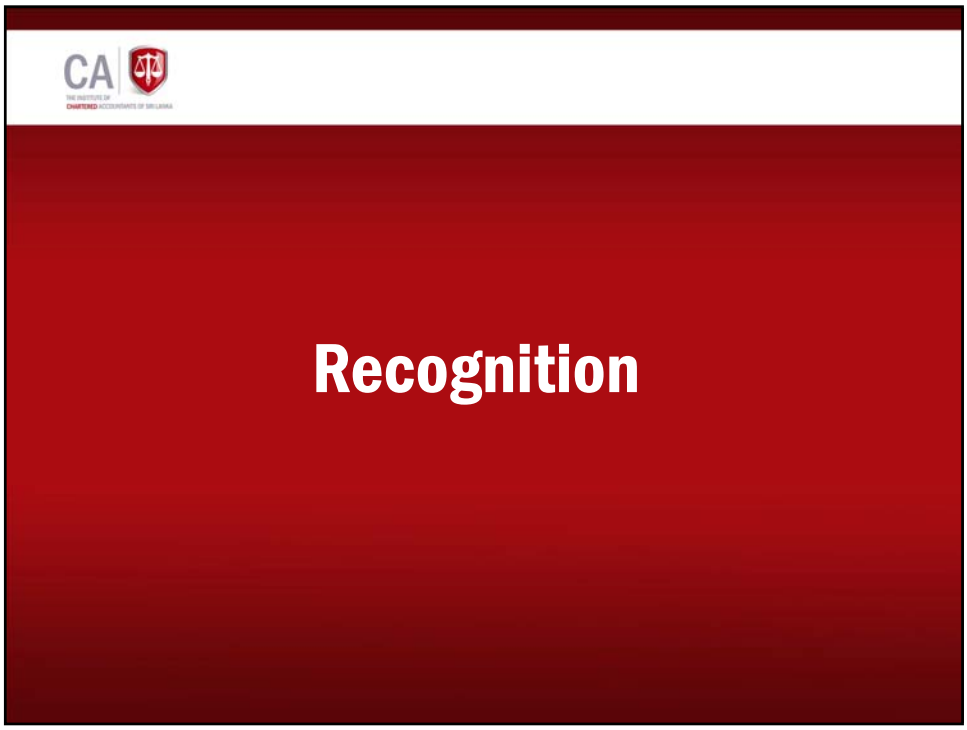
Example :Cattle farm

- **Entity A raises cattle, slaughters them at its abattoirs and sells the carcasses to the local meat market. Which of these activities are in the scope of LKAS 41?**

- The cattle are biological assets while they are living. When they are slaughtered, biological transformation ceases and the carcasses meet the definition of agricultural produce.
- Hence, entity A should account for the live cattle in accordance with LKAS 41 and the carcasses as inventory in accordance with LKAS 2.

Example :Vineyard

- **Entity B grows vines, harvests the grapes and produces wine. Which of these activities are in the scope of LKAS 41?**
- The grapevines are biological assets that continually generate crops of grapes. When the entity harvests the grapes, their biological transformation ceases and they become agricultural produce. The grapevines continue to be living plants and should be recognised as biological assets.
- Assets such as wine that are subject to a lengthy maturation period are not biological assets. These processes are analogous to the conversion of raw materials to a finished product rather than biological transformation.
- Therefore, the entity should account for the grapevines in accordance with LKAS 41 and the harvested grapes and the production of wine, as inventory in accordance with LKAS 2.



Recognition

- **An entity shall recognise a biological asset or agricultural produce within the scope of LKAS 41 only when:**
  - a) **it controls the asset as a result of past events;**
  - b) **it is probable that future economic benefits associated with the asset will flow to the entity; and**
  - c) **the fair value or cost of the asset can be measured reliably.**

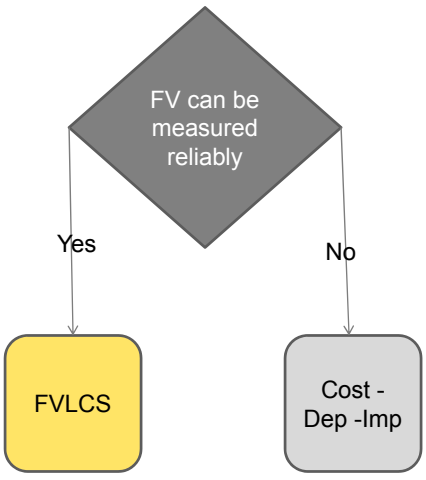
Control

- **In agricultural activity, an entity may evidence control by, for example, 'legal ownership of cattle and the branding or otherwise marking of the cattle on acquisition, birth, or weaning'.**

Measurement

Measurement (Initial recognition): Biological asset

- A biological asset shall be measured on initial recognition and at the end of each reporting period at its fair value less costs to sell (FVLCS), unless the fair value cannot be measured reliably.
- In the latter case, the entity shall measure the biological assets at historical cost less any accumulated depreciation and any accumulated impairment losses



Measurement (Initial recognition): Agricultural produce

- Agricultural produce harvested from an entity's biological assets should initially be measured at its fair value less costs to sell at the point of harvest
- The standard presumes that an entity can always determine this amount and hence does not permit valuation at historical cost on the grounds that the fair value cannot be determined reliably.

Measurement (Subsequent recognition): Agricultural produce cont...

- The value resulting from initial measurement is subsequently used as cost in applying LKAS 2 (if the agricultural produce is to be sold), LKAS 16 (if harvested logs are used for the construction of a building) or other applicable SLFRS.

Gains and losses

- A gain or loss arising on initial recognition of a biological asset at fair value less costs to sell and from a change in fair value less costs to sell of a biological asset shall be included in profit or loss for the period in which it arises.

- A gain or loss arising on initial recognition of agricultural produce at fair value less costs to sell shall be included in profit or loss for the period in which it arises.

What is revenue in the context of LKAS 41

- The sale of agricultural produce is clearly revenue as defined by LKAS 18, 'Revenue'.
- LKAS 18 specifically scopes out revenue arising from changes in fair value and initial gains and losses for agricultural assets and produce.
- Fair value gains are income in accordance with the framework; fair value losses are expenses.
- Fair value gains may be shown as part of total income but separately from revenue.

Categories of income related to LKAS 41

Category	Remarks
Initial gain or loss on biological assets	Typically arise when a biological asset is purchased. The cost of the biological asset is often higher than the fair value less costs to sell, as the latter represents an exit price, and transaction expenses therefore create a loss. Initial gains on biological assets arise when new biological assets are generated – for example, when a calf or a piglet is born.
Changes in fair value less costs to sell of biological assets	This represent the difference in value from period to period, normally on an aggregated basis. It is therefore sometimes difficult to distinguish from the initial gain due to procreation. The value typically increases due to growth, procreation and higher prices, but may decrease due to degeneration, sickness and lower prices.
Initial gain or loss on agricultural produce.	This represents the difference between the change in carrying value of the biological assets due to harvest and the fair value less costs to sell of the harvested agricultural produce. It reflects the last stage of the value creation of the biological process, and the harvested produce is transferred to inventory. There may be further costs involved in preparing the inventory for market.

Determining Fair Value Less Costs To Sell (FVLCS)

- **FVLCS = Fair value – Costs to sell**

Cost to sell are the incremental costs directly attributable to the disposal of an asset, excluding finance costs and income taxes

Determining costs to sell

- Costs to sell are the incremental costs directly attributable to the disposal of an asset excluding finance costs and income tax.
- Costs to sell should include all costs that are necessary for a sale to occur but would otherwise not arise.
- However, the inclusion of the word incremental in the definition requires the exclusion of costs already included within the fair value measurement, such as transportation costs.
- Examples of costs to sell could include brokers' and dealers' commissions, levies by regulatory agencies and commodity exchanges, transfer taxes and duties.

Determining fair value : the fair value hierarchy

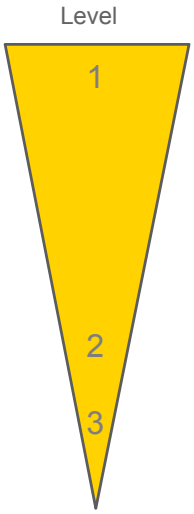
a) **an active market exists** – the quoted price in that market is the appropriate basis for determining the fair value of that asset

b) **no active market –** if an active market does not exist an entity should use the following methods for arriving at an estimate of fair value:

   I. market-determined prices or values

   II. discounted cash flows

   III. cost as an approximation of fair value



Determining fair value in an active market

- If an active market exists for a biological asset or agricultural produce in its present location and condition, **the quoted price in that market is** the appropriate basis for determining the fair value of that asset.

- If the entity has access to different active markets, it should use the quoted price in **the most relevant market** (i.e. the price in the market which is expected to be used).

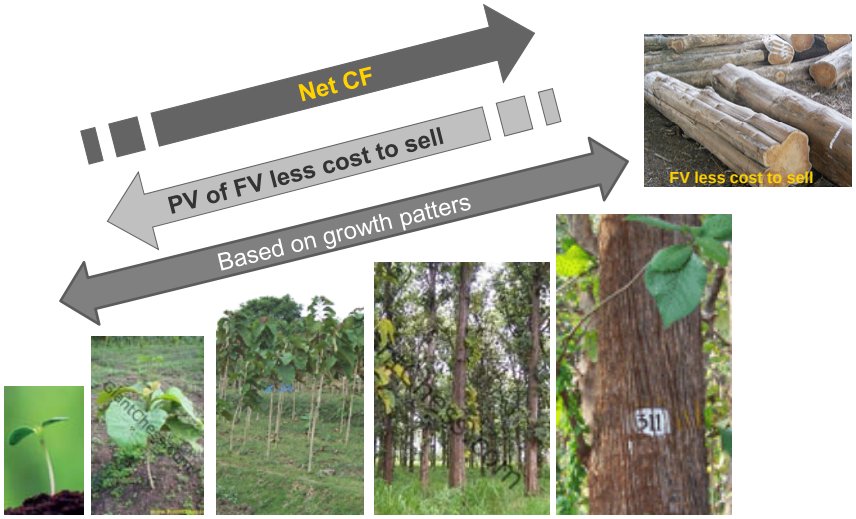
No active market :A Market-determined prices or values

- When determining fair value using market-determined prices or values, the entity should use one or more of the following information sources, when available:
  - the most recent market transaction price, provided that there has not been a significant change in economic circumstances between the date of that transaction and the end of the reporting period;
  - market prices for similar assets with adjustment to reflect differences; and
  - sector benchmarks such as the value of an orchard expressed per export tray, bushel, or hectare, and the value of cattle expressed per kilogram of meat.

No active market : Discounted cash flows

- If market-determined prices or values are not available for a biological asset in its present condition, an entity should use
  - **the present value** of **expected net cash flows from the asset** discounted at a **current market-determined rate** in determining fair value'.
- Key inputs ;
  - Expected net cash flow
  - Current market –determined rate

Illustration Standing Timber Valuation



Growth rates

- Growth, i.e. the increase in volume through biological transformation during a given period of time, is essential to the fair value calculation.
- For any species of tree, growth is dependent upon general climate conditions, soil, silvicultural practice, and quality of genetic material. However, management must perform a series of qualified judgments, assessments and field studies.
- Sometimes external specialists are engaged to establish growth rates during one cycle for various species, taking into consideration local conditions.
- Without growth rates, it is not possible to apply DCF-modelling based on future growth until harvest.
- Assumptions of growth, the need for reforestation, and related thinnings are estimated in the harvesting plan.

Present location and condition

- The objective of a calculation of the present value of expected net cash flows is to determine the fair value of a biological asset in its present location and condition.
- An entity should consider this in determining an appropriate discount rate and in estimating expected cash flows.

PV of expected cash flows : considerations

- includes the net cash flows that market participants would expect the asset to generate in its most relevant market.
- expectations about possible variations in cash flows into either the expected cash flows, or the discount rate, or some combination of the two
- should ensure that it uses assumptions for determining a discount rate that are consistent with those used in estimating the expected cash flows; this to avoid double-counting or overlooking of risks.
- should exclude the cash flows for financing the assets, taxation or re-establishing biological assets after harvest, for example, the cost of replanting trees in a plantation forest after harvest.

Discount rates: IFRIC item not added to agenda

IAS 41 - Item 1: Discount rate assumption used in fair value calculations

Issue

- **How an entity should determine an appropriate discount rate when the fair value of biological assets is estimated as the present value of expected net cash flows.**

Reasons and Conclusions

- The Interpretations Committee noted that the objective of fair value measurement in IAS 41 is consistent with that in other standards, and paragraph 21 was amended in May 2008 to clarify that in determining the present value of net cash flows, an entity includes the net cash flows that market participants would expect the asset to generate. When an entity incurs an initial cost with respect to a biological asset, paragraph 24 of IAS 41 notes that that cost may approximate fair value when little biological transformation has taken place since the cost was incurred. **In these situations the Interpretations Committee noted that the discount rate selected would be expected to result in a value that approximates that cost.** The Interpretations Committee also noted that IAS 39 and other material recently published by the Board provide extensive guidance on estimating fair values for assets that do not have readily observable prices in active markets that would also be relevant for biological assets.

Decision Date: May 2009

No active market : Cost as an approximation of fair value (only at initial recognition)

- Sometimes an entity can use cost as an approximation of fair value, 'particularly when;
  - little biological transformation has taken place since initial cost incurrence' or
  - the impact of the biological transformation on price is not expected to be material
    - for example, for the initial growth in a 30-year pine plantation production cycle

Forward sales contracts

- When an entity enters into a contract to sell its biological assets or agricultural produce at a future date, the standard does not permit it to measure those assets at the contracted price, stating that 'the fair value of a biological asset or agricultural produce is not adjusted because of the existence of a contract'.

Biological assets attached to land

- Biological assets are often physically attached to land (for example, trees in a plantation forest).'
- In many cases there is no separate market for biological assets that are attached to the land, but 'an active market may exist for the combined assets, that is, for the biological assets, raw land, and land improvements, as a package'.
- An entity can use the information regarding the combined assets to determine the fair value of the biological assets.

Grouping of assets

- IAS 41 states that 'the determination of fair value for a biological asset or agricultural produce may be facilitated by grouping biological assets or agricultural produce according to significant attributes; for example, by age or quality.
- An entity selects the attributes corresponding to the attributes used in the market as a basis for pricing'.
  - example, when undertaking a forestry valuation, an entity may group trees in the forest based on factors such as species, when and where the trees were planted and the expected yield.

Inability to measure fair value reliably

- Under LKAS 41, there is a presumption that the fair value of all biological assets can be measured reliably.
- This presumption can only be rebutted on initial recognition for a biological asset.
  - for which market-determined prices or values are not available and
  - for which alternative estimates of fair value are determined to be clearly unreliable.
- In such a case, that biological asset shall be measured at its cost less any accumulated depreciation and any accumulated impairment losses.
- Once the fair value of such a biological asset becomes reliably measurable, an entity shall measure it at its fair value less costs to sell.

Government Grants

Government grants

- Government grants involving biological assets should only be accounted for under LKAS 20 if the biological asset is 'measured at its cost less any accumulated depreciation and any accumulated impairment losses'

Unconditional government grant related to a biological asset

- An unconditional government grant related to 'a biological asset measured at its fair value less costs to sell shall be recognised in profit or loss when, and only when, the government grant becomes receivable'.
- An entity is therefore not permitted under LKAS 41 to deduct a government grant from the carrying amount of the related asset.

Conditional government grant related to a biological asset

- Any conditional government grant related to a biological asset measured at its fair value less costs to sell – including government grants that require an entity not to engage in a specified agricultural activity – should be recognised only when the conditions attaching to the grant are met
- LKAS 41 permits an entity to recognise a government grant as income only to the extent that it
  - has met the terms and conditions of the grant and
  - has no obligation to return the grant

Disclosures

Disclosure

- General
- Additional disclosures for biological assets where fair value cannot be measured reliably
- Government grants

General disclosures

- the aggregate gain or loss arising during the current period on initial recognition of biological assets and agricultural produce and from the change in fair value less costs to sell of biological assets.
- a description of each group of biological assets.

General disclosures cont...

- If not disclosed elsewhere in information published with the financial statements, an entity shall describe:
  - The nature of its activities involving each group of biological assets; and
  - Non-financial measures or estimates of the physical quantities of:
    - each group of the entity's biological assets at the end of the period; and
    - output of agricultural produce during the period.

General disclosures cont...

- An entity shall disclose the methods and significant assumptions applied in determining the fair value of each group of agricultural produce at the point of harvest and each group of biological assets.
- An entity shall disclose the fair value less costs to sell of agricultural produce harvested during the period, determined at the point of harvest.

General disclosures cont...

- The existence and carrying amounts of biological assets whose title is restricted, and the carrying amounts of biological assets pledged as security for liabilities;
- The amount of commitments for the development or acquisition of biological assets; and
- Financial risk management strategies related to agricultural activity.

General disclosures cont...

- An entity shall present a reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current period. The reconciliation shall include:
  - the gain or loss arising from changes in fair value less costs to sell;
  - increases due to purchases;
  - decreases attributable to sales and biological assets classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with SLFRS 5;
  - decreases due to harvest;
  - increases resulting from business combinations;
  - net exchange differences arising on the translation of financial statements into a different presentation currency, and on the translation of a foreign operation into the presentation currency of the reporting entity; and
  - other changes.

Disclosures from LKAS 1

- p125: An entity shall disclose information about the assumptions it makes about the future, and other major sources of estimation uncertainty at the end of the reporting period, that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year.
- p 129: An entity presents the disclosures in paragraph 125 in a manner that helps users of financial statements to understand the judgements that management makes about the future and about other sources of estimation uncertainty. The nature and extent of the information provided vary according to the nature of the assumption and other circumstances. Examples of the types of disclosures an entity makes are:
  - (b) the sensitivity of carrying amounts to the methods, assumptions and estimates underlying their calculation, including the reasons for the sensitivity;

Example sensitivity disclosures 1 (Sweeden)

Södra[10)]

The following sensitivity analysis shows how the value of standing timber would be affected if the key valuation parameters were attributed other values than those that form the basis of the current valuation.

Variabel	Change	Change in value after tax, SEK million
Discount rate	+/– 0.25%	+/– 25
Wood price	+/– 0.5% in real terms	+/– 5
Harvesting costs	+/– 0.5% in real terms	+/– 3
Harvesting volumes	+/– 1%	+/– 2

Example sensitivity disclosures 2 (Switzerland)

Precious Woods[11)]

And as Precious Woods[11)] puts it *"A decrease of the interest rate of 1% would result in an increase in the fair value of the biological assets of USD 6.6 million whereas an increase of 1% would decrease the fair value by USD 5.8 million. An increase in the prices by 10% would lead to an increase in the fair value of the biological assets by USD 8.1 million. A decrease in the prices by 10% would result in a decrease by USD 8.1 million."*

Example sensitivity disclosures 3 (South Africa)

Sappi [12)]

Changes in estimate prices, the discount rate, costs to sell and, volume and growth assumptions applied in the valuation of immature timber may impact the calculated fair value as tabled below:

US$ Million	2010	2009	2008
Market price changes			
1% increase in market prices	2	12	17
1% decrease in market prices	(2)	(12)	(17)
Discount rate (for immature timber)			
1% increase rate	(5)	(3)	(4)
1% decrease rate	5	3	4
Volume assumption			
1% increase in estimate of volume	9	6	6
1% decrease in estimate of volume	(9)	(6)	(6)
Costs to sell			
1% increase in costs to sell	(1)	(9)	(10)
1% decrease in costs to sell	1	9	10
Growth assumptions			
1% increase in rate of growht	2	1	1
1% decrease in rate of growht	(2)	(1)	(1)

Disclosures for biological assets where fair value cannot be measured reliably

- If an entity measures biological assets at their cost less any accumulated depreciation and any accumulated impairment losses (see paragraph 30) at the end of the period, the entity shall disclose for such biological assets:
  - a description of the biological assets;
  - an explanation of why fair value cannot be measured reliably;
  - if possible, the range of estimates within which fair value is highly likely to lie;
  - the depreciation method used;
  - the useful lives or the depreciation rates used; and
  - the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period.

Disclosures for biological assets where fair value cannot be measured reliably cont...

- If, during the current period, an entity measures biological assets at their cost less any accumulated depreciation and any accumulated impairment losses (see paragraph 30), an entity shall disclose any gain or loss recognised on disposal of such biological assets and the reconciliation required by paragraph 50 shall disclose amounts related to such biological assets separately.
- In addition, the reconciliation shall include the following amounts included in profit or loss related to those biological assets:
  - impairment losses;
  - reversals of impairment losses; and
  - depreciation.

Disclosures for biological assets where fair value cannot be measured reliably cont...

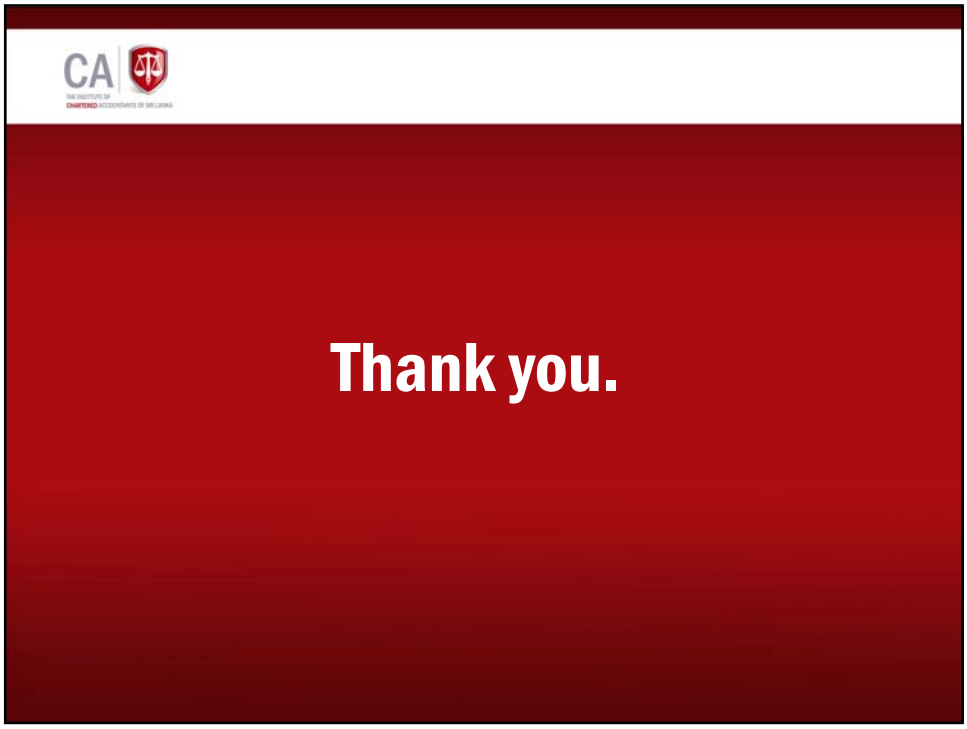
- If the fair value of biological assets previously measured at their cost less any accumulated depreciation and any accumulated impairment losses becomes reliably measurable during the current period, an entity shall disclose for those biological assets:
  - a description of the biological assets;
  - an explanation of why fair value has become reliably measurable; and
  - the effect of the change.

Government grants

- An entity shall disclose the following related to agricultural activity covered by this Standard:
  - the nature and extent of government grants recognised in the financial statements;
  - unfulfilled conditions and other contingencies attaching to government grants; and
  - significant decreases expected in the level of government grants.

Transitional provisions

- No transitional provisions
- Is it practicable to measure FVLCS at 1 January 2011 and 1 April 2011?
- SLFRS 1 does not have any provisions
- Short term implementation support via SLFRS 1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Thank you.