STAFF PAPER

March 2012

IFRS Interpretations Committee Meeting

Project	**Annual Improvements—2011–2013 cycle**		
Paper topic	IAS 16 *Property, Plant and Equipment* and IAS 38 *Intangible Assets*–Revenue-based depreciation method		
CONTACT(S)	Denise Durant	ddurant@ifrs.org	+44 (0)20 7246 6469

Introduction

1. At the November 2011 meeting, the IFRS Interpretations Committee (the Committee) discussed a request to clarify the meaning of the term 'consumption of the expected future economic benefits embodied in the asset' when determining the appropriate amortisation method for intangible assets of service concession arrangements (SCA) that are within the scope of IFRIC 12 *Service Concession Arrangements*. The issue relates to the application of paragraphs 97 and 98 of IAS 38, *Intangible Assets*.

2. In the fact pattern sent by the submitter, which was the description of a toll road:

   (a) the rate chargeable to users is agreed in the contract; and

   (b) a lower tariff is imposed at the beginning of the concession and increases periodically in line with the grantor's practice so as not to burden consumers.

3. At that meeting the Committee members considered whether:

   (a) a revenue-based amortisation method better reflects the economic reality of the underlying contractual terms;

(b) a time-based amortisation method is most appropriate, because it reflects the duration of the SCA and the fact that the entity received a licence to operate the infrastructure; or

(c) a units-of production method of amortisation is adequate, because it reflects the physical wearing out of the underlying asset granted to the operator.

4. At the November 2011 meeting a majority of the Committee members noted that for the specific fact pattern, in which the use of a toll road may be low in early periods and high in later periods, an amortisation method based on the expected number of cars using the road (a units-of-production approach) might be more appropriate to reflect the pattern of consumption of the expected future economic benefits that are embodied in the intangible asset.

5. The Committee further noted that amortisation and/or depreciation methods based on expected revenues was not consistent with the requirement to reflect the pattern of consumption of the expected future economic benefits and directed the staff to propose an annual improvement to clarify this.

Objective of this paper

6. The objective of this paper is to:

(a) provide background information;

(b) provide an analysis of the issue; and

(c) propose an amendment to IAS 38 and IAS 16 *Property Plant and Equipment* as part of the annual improvements project (2011-2013 cycle).

Overview of previous discussions

7. As shown in the records of past discussions held by the Board and/or the Committee (ie in December 2006, March 2008, November 2009, January 2010), there has been a common request among constituents to provide further guidance:

   (a) on the meaning of 'consumption of economic benefits' for tangible and intangible assets; and

   (b) on the selection of amortisation methods that best reflect the pattern of consumption of future economic benefits.

8. At those past discussions, the Board and the Committee:

   (a) have not specifically discussed the meaning of the term 'consumption of the expected future economic benefits embodied in the asset'; and

   (b) have noted that the selection of an amortisation method is a matter of judgement and that any assistance that they could provide would be in the nature of application guidance rather than an interpretation.

9. At the November 2011 meeting the Committee noted that even though the selection of an amortisation methodology involves the use of judgement, a revenue-based method is not considered to be an appropriate manifestation of consumption. This is because revenues represent the generation of expected economic benefits rather than the consumption of economic benefits. Consequently the Committee directed the staff to propose an amendment that would prohibit this method.

10. The staff had originally proposed an amendment to IFRIC 12 *Service Concession Arrangements*. The Committee members noted that the amendment should be included in IAS 38 and IAS 16 instead of in IFRIC 12 to prevent the use of this method in general.

11. In response to the views expressed by Committee members, in the following section we will:

   (a) provide a description of a revenue-based methodology;

(b) confirm that clarification is needed in the current guidance for the selection of depreciation and/or amortisation methods in paragraphs 60 and 62 of IAS 16 and in paragraphs 97–98 of IAS 38; and

(c) propose an amendment to IAS 16 and IAS 38 to prohibit the use of revenue-based methodologies.

Staff analysis

What do we mean by a revenue-based methodology?

12. In our analysis of the issue raised by the submitter at the November 2011 meeting, we defined revenue-based methodologies as those in which quantity (volume) and price interact in determining the charge for amortisation or depreciation.

13. In the accounting literature that we consulted[1] a method based on 'sales' or 'revenue' is often classified as a 'production' method of apportioning depreciation. Some of the main features of this method are that:

    (a) it correlates costs and results;

    (b) the charge for depreciation is spread out over the useful life of an asset in terms of the asset's relative:

        (i) productivity; and/or

        (ii) operation.

14. Consequently, the depreciation or amortisation charge to profit or loss varies with the operating activity of the asset, with the result that years with low activity are not so greatly affected by a depreciation charge as opposed to years of intense activity when the charge increases in direct proportion to the higher level of activity.

[1] W.A Paton, *Accountants' handbook* (3rd edition) The Ronald Press Company (1943) pages 711-763.

An example of a revenue-based methodology

15. The submission discussed at the November 2011 meeting did not include an example of a revenue-based methodology. We subsequently got in touch with the submitter, who referred us to the annual report of a concessionaire that includes the following amortisation formula:

$$\left[\frac{\text{Cumulative actual toll revenue to date}}{\text{Cumulative actual toll revenue to date + projected total toll revenue for the remaining concession period}} \times \text{Cumulative Actual Expenditure} \;\; \text{less} \;\; \text{Accumulated amortisation at the beginning financial year} \right]$$

16. We note that in this illustration, revenue is a function of:

(a) projected traffic volumes; and

(b) toll rates under the concession agreement.

17. The concessionaire informed us that in this particular concession arrangement, toll rates increase gradually during the concession period and different toll rates are charged depending on the type of vehicle. If the government (grantor) reduces the toll rates below the agreed rates, the concession agreement establishes that the government must compensate the operator for any reduction in toll collections.

18. We asked the concessionaire why this amortisation methodology was employed in practice. The concessionaire's opinion was that the use of another methodology (for example, one based on the physical consumption of the road) would not be appropriate for this particular type of concession arrangement, because a revenue-based methodology allows the concessionaire to spread out the amortisation charge in close connection with the actual operation of the toll road, which is reflected by the movement of the toll rates.

Is a revenue-based methodology compatible with other methodologies in IAS 16 and IAS 38?

19. In our view, even though IAS 16 and IAS 38 apparently allow a number of depreciation or amortisation methods, we do not think that this selection is based on a free choice. In the following paragraphs we will explain why we think that a

revenue-based approach does not meet the requirements in IAS 16 and IAS 38 for the selection of an appropriate depreciation and/or amortisation basis.

Does it represent a systematic allocation?

20. Paragraph 6 of IAS 16 defines depreciation and paragraph 8 of IAS 38 defines amortisation as a systematic allocation of the cost of the depreciable/amortisable amount of a tangible or intangible assets, over its estimated useful life.

21. A 'systematic' method is characterised by the use of order and planning; ie, by a method that is methodical, regular and efficient. There are some who think that a revenue-based methodology does not represent a systematic form of allocation, because projected revenues might not be forecast in a reasonable or expedient way. We do not agree entirely with this view, because we think that there is also a high degree of estimation involved when determining the future number of physical units for many assets.

22. Some others also object the use of a revenue-based method when depreciation is viewed as a provision of funds for asset replacements (being that depreciation is a process of allocation and not of valuation); and when it is used to stabilise profit more than to reflect the pattern of consumption of the asset's future economic benefits. We are reproducing below a paragraph from the accounting literature that we consulted[2] that refers this view:

> There still persists, in the management of some business, an inclination to determine the amount of the depreciation provision after having ascertained the net income for the period before depreciation. This is possibly a survival from the days when the true nature of depreciation as an expense was not as well recognized as it is now; it possibly also arises from the confused assumption that a credit to the depreciation reserve in some way constitutes a provision of funds for asset replacements, and that the amount to be thus provided is a matter of managerial

[2] H.A. Finney, *Principles of Accounting* (Intermediate), third edition, 1946, page 332.

> policy to be determined on the basis of the amount of profit available for that and other purposes; the practice may also stem from the desire of management to use the depreciation provisions as a means of stabilizing the reported net income, a practice which should be recognized as conscious or unconscious deception.

Is it consistent with the pattern of consumption of an asset?

23. Paragraph 60 of IAS 16 and 97 of IAS 38 clarifies that the allocation should “reflect the pattern in which the asset’s future economic benefits are expected to be consumed by the entity”.

24. We think that the objective of a depreciation method, is to approximate the pattern in which the bundle of economic benefits (inherent in every asset) diminishes over time.

25. Paragraph 56 of IAS 16 contains a presumption that a common way to identify a pattern of consumption of an asset is through the expected usage of the asset, as stated below (emphasis added):

> The future economic benefits embodied in an asset can be consumed by an entity **principally through its use**.

26. The ‘use’ of an asset can be assessed by reference to the asset’s expected capacity or physical output in accordance with paragraph 56(a). Other factors that are mentioned in paragraph 56(a)–(d) of IAS 16 to assist in the determination of a pattern of consumption of an asset, as follows:

    (a) expected physical wear and tear;

    (b) technical or commercial obsolescence; and

    (c) limits on the use of an asset (eg legal limits).

27. Similar factors are mentioned in paragraph 90 of IAS 38, as follows:

    (a) the expected usage of the asset by the entity and whether the asset could be managed efficiently by another management team;

(b) typical product life cycles for the asset and public information on estimates of useful lives of similar assets that are used in a similar way;

(c) technical, technological, commercial or other types of obsolescence;

(d) the stability of the industry in which the asset operates and changes in the market demand for the products or services that are output from the asset;

(e) expected actions by competitors or potential competitors;

(f) the level of maintenance expenditure required to obtain the expected future economic benefits from the asset and the entity's ability and intention to reach such a level;

(g) the period of control over the asset and legal or similar limits on the use of the asset, such as the expiry dates of related leases; and

(h) whether the useful life of the asset is dependent upon the useful life of other assets of the entity.

28. From the lists of factors considered in paragraph 56(a)–(d) of IAS 16 and paragraph 90 of IAS 38, we could not identify any allowing the use of a revenue-based methodology.

29. We think that a revenue-based approach has little bearing on the use of an asset, because:

(a) it is a function of the level of productivity of an asset, which is clearly different from an asset's capacity or physical output (eg number of operations or units of work for a particular machine) and much more difficult to determine;

(b) variations in productivity for a particular asset might not necessarily coincide with the way in which an asset is being used up (ie the quantity of production);

(c) the aging or waste of an equipment might have no relation with the projected business activity for that equipment; and

(d) price changes (such as inflation) have no bearing in the way in which the asset is worn out or is used up.

30. In addition, revenue reflects a pattern of generation of economic benefits (net cash inflows) and does not depict a pattern of consumption of economic benefits. In paragraph 17 of IAS 38, the future economic benefits flowing from an intangible asset may include "revenue from the sale of products or services, cost savings, or other benefits resulting from the use of the asset by the entity".

Is it consistent with the methodologies permitted in IAS 16 or in IAS 38?

31. Paragraphs 62 of IAS 16 and 98 of IAS 38 support a variety of depreciation/amortisation methodologies that include, among others:

(a) the straight-line method,

(b) the diminishing balance method; and

(c) the units of production method.

32. The methodologies mentioned above are consistent with the definition of *useful life* in paragraph 8 of IAS 38 which states that useful life is either:

(a) <u>a period</u> over which an asset is expected to be available for use; or

(b) <u>a number</u> of production or similar units that are expected to be obtained from the asset by an entity.

33. A revenue-based method is neither based on:

(a) a period, because it does not assume that depreciation is a uniform function of time and instead assumes that is a function of the economic benefits generated from the asset or from the asset's level of productivity; nor

(b) a number of units, because it represents an interaction of quantity (unit) *and* price.

34. At the November 2011 meeting some Committee members contended that only 'pure' revenue-based methodologies should be prohibited. We think that members were referring to a methodology that considers inflation and other price changes. We disagree with this view. Assuming the variable component is removed (ie inflation) this would leave us with a fixed (price) component in the depreciation formula[3]; the latter would make the 'price' component irrelevant and would turn the depreciation formula into a units-based approach, as the illustration below shows:

$$\frac{\cancel{\text{Fixed price}} \times \text{units}}{\cancel{\text{Projected fixed price}} \times \text{units for the remaining period}}$$

Some final considerations

35. One of the Committee members at the November 2011 meeting mentioned that in the United States, amortisation methods based on revenue are allowed for amortising non-monetary assets in some industries (eg for example, film rights in the film/broadcasting industry) but clarified that these rights are not viewed as intangibles and instead are classified as part of inventory.

36. It is our understanding that Topic 920 *Entertainment–Broadcasters* in the *FASB Accounting Standards Codification*® or (formerly Statement No.63 *Financial Reporting by Broadcasters*, issued in 1982) does not prohibit the use of a flow of revenue, number of airings or the straight-line method for amortisation.

37. For illustration purposes we are reproducing below some perspectives of how acquired programming rights could be amortised. These perspectives are included in a study made by an accounting firm that is available in the public website[4]:

[3] That we assume would remain constant for the remaining period.

[4] *Achieving corporate financial reporting objectives*: Perspectives on the entertainment, Media & communication industry", February 2011, PwC, page 9. http://www.pwc.com/en_US/us/industry/entertainment-media/assets/EMC-perspectives-broadcast-television-acquired-program-rights-march-2011.pdf

> The flow-of-revenue model, which matches the costs with the expected revenue pattern, is often appropriate when a title has significant value, such as for blockbuster-type films. Accordingly, this model typically drives greater amortization during early runs because initial airings generally result in higher advertising revenues". If a title or, in some cases, a bundle of titles, does not generate significantly greater incremental revenues from its initial airing compared with subsequent airings, then amortization on a straight-line basis or based on a fixed amount per airing would be appropriate.

38. Even though we found some merit in the use of revenue-based approaches by broadcasters (because there seems to be a need for more rapid extinguishing of the cost of an asset), we maintain that in IFRSs revenue-based approaches are not permitted, based on the current guidance for depreciation and amortisation in IAS 16 and in IAS 38.

Staff recommendation

39. On the basis of our analysis above, we think that a clarification is needed to paragraph 98 of IAS 38 and paragraph 62 of IAS 16 to state that revenue-based methodologies are not permitted. Our basis for asking for clarification is that a revenue-based method for depreciating or amortising an asset:

    (a) might not reflect a systematic allocation of the cost of the depreciable/amortisable amount of a tangible or intangible asset, because:

        (i) revenues might not be forecast in a reasonable or expedient way; and

        (ii) some price changes (such as inflation) have no bearing in the way in which the asset is worn out or is used up.

(b) is inconsistent with the pattern of consumption of an asset because the variations in productivity for a particular asset might not necessarily coincide with the way in which an asset is being used up; and

(c) is neither based on a period nor on a number of units.

Transition requirements

40. We are of the opinion that transition provisions should follow the general principles in IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* and entities should apply the proposed amendment prospectively in line with existing requirements for changes in accounting estimates in paragraphs 32–38 of IAS 8.

41. Our proposals to amend those paragraphs are shown in Appendices A and B of this paper.

Question for the Committee – amortisation and/or depreciation based on a revenue-based approach

1. Does the Committee agree with the staff recommendation that a clarification is needed for paragraph 98 of IAS 38 and for paragraph 62 of IAS 16 to state that a revenue-based method is not permitted?

2. Does the Committee have any comments on the proposed changes shown in Appendices A or B?

Appendix A—Proposed changes (IAS 16)

A1. The proposed amendment to IAS 16 is presented below.

Amendment to IAS 16 *Property, Plant and Equipment*

Paragraph 62A is added. Paragraph 62 is not proposed for amendment but is included here for ease of reference

Depreciation method

62 A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods include the straight-line method, the diminishing balance method and the units of production method. Straight-line depreciation results in a constant charge over the useful life if the asset's residual value does not change. The diminishing balance method results in a decreasing charge over the useful life. The units of production method results in a charge based on the expected use or output. The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.

62A A revenue-based method (ie one that takes into account the actual revenue to estimated revenue ratio as the depreciation basis and that is derived from an interaction between quantity and price) is not considered to be an appropriate method, because it reflects a pattern of generation of the expected future economic benefits embodied in the asset rather than a pattern of consumption of those benefits and results in a depreciation charge that does not reflect the way in which the asset is being used up.

Effective date

81G *Improvements to IFRSs* issued in [date] added paragraph 62A. An entity shall apply this amendment prospectively for annual periods beginning on or after [date]. Earlier application is permitted.

Basis for Conclusions on proposed amendments to IAS 16 *Property, Plant and Equipment*

This Basis for Conclusions accompanies, but is not part of, the proposed amendments.

Depreciation method

BC1 The Board considered whether it would be appropriate for fixed assets to be depreciated using a revenue-based depreciation method (ie one that is derived from an interaction between quantity and price and that takes into account the actual revenue to projected revenue ratio as the depreciation basis) to allocate the depreciable amount of an asset. Paragraph 60 states that "the depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity" The Board proposes that revenue-based methods should not be permitted because they reflect a pattern of generation of economic benefits from the asset rather than the consumption of economic benefits of the asset. In addition, paragraph 56 states that "the future economic benefits embodied in an asset can be consumed by an entity principally through its use" and paragraph 56(a) states that "the usage of an asset can be assessed by reference to the asset's expected capacity or physical output". The Board noted that that a revenue-based approach results in a charge that is based on the asset's productivity, which might not necessarily coincide with the way an asset in which is being used up. Paragraph 6 states that "depreciation is the systematic allocation of the depreciable amount of an asset over its useful life". The Board also noted that a revenue-based approach might not be considered a systematic method when projected revenues are not reasonably determined.

Appendix B—Proposed changes (IAS 38)

B1 The proposed amendment to IAS 38 is presented below.

Amendment to IAS 38 *Intangible Assets*

Paragraph 98A is added. Paragraph 98 is not proposed for amendment but is included here for ease of reference

Depreciation method

98 A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods include the straight-line method, the diminishing balance method and the unit of production method. The method used is selected on the basis of the expected pattern of consumption of the expected future economic benefits embodied in the asset and is applied consistently from period to period, unless there is a change in the expected pattern of consumption of those future economic benefits

98A A revenue-based method (ie one that takes into account the actual revenue to estimated revenue ratio as the amortisation basis and that is derived from an interaction between quantity and price) is not considered to be an appropriate method because it reflects a pattern of generation of the expected future economic benefits embodied in the asset rather than a pattern of consumption of those benefits and results in an amortisation charge that does not reflect the way in which the asset is being used up.

Transitional provisions and effective date

133 *Improvements to IFRSs* issued in [date] added paragraph 98A. An entity shall apply this amendment prospectively for annual periods beginning on or after [date]. Earlier application is permitted.

Basis for Conclusions on proposed amendments to IAS 38 *Intangible Assets*

This Basis for Conclusions accompanies, but is not part of, the proposed amendments.

Depreciation method

BC1 The Board considered whether it would be appropriate for intangible assets to be amortised using a revenue-based depreciation method (ie one that is derived from an interaction between quantity and price and that takes into account the actual revenue to projected revenue ratio as the depreciation basis) to allocate the depreciable amount of an asset. Paragraph 97 states that "the amortisation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity". The Board proposes that revenue-based methods should not be permitted because they reflect a pattern of generation of economic benefits from the asset rather than the consumption of economic benefits of the asset. In addition, paragraph 89 states that "the accounting for an intangible asset is based on its useful life" and paragraph 90 mentions several factors that could be considered in determining the useful life of an intangible asset, among others "the expected usage of an asset" in accordance with paragraph 90(a). The Board noted that that a revenue-based approach results in a charge that is based on the asset's productivity, which might not necessarily coincide with the way in which an asset is being used up. Paragraph 97 states that "the depreciable amount of an intangible asset with a finite useful life shall be allocated on a systematic basis over its useful life" The Board also noted that a revenue-based approach might not be considered a systematic method when projected revenues are not reasonably determined.