STAFF PAPER

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Project	**Goodwill and Impairment research project**		
Paper topic	Value in use: what tax attribute should be reflected in value in use?		
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Purpose

1. This paper asks the Board whether it wishes to consider removing from IAS 36 *Impairment of Assets* the explicit requirement to use pre-tax inputs in calculating value in use.

Structure of the paper

2. The paper is structured as follows:

   (a) background and introduction (paragraphs 3–14);

      (i) previous feedback on the use of pre-tax inputs;

      (ii) basis in IAS 36 for requiring the use of pre-tax inputs;

   (b) staff analysis and conclusions (paragraphs 15–47);

      (i) what is the double counting issue?

      (ii) possible approaches that the Board could consider;

      (iii) inconsistency in measurement of deferred tax assets and deferred tax liabilities;

   (c) question for the Board;

   (d) *Appendix A*—Extracts from the Basis for Conclusions on IAS 36;

(e) *Appendix B*—Example illustrating the effect of future tax cash flows on current value of an asset; and

(f) *Appendix C*—Extracts from the Basis for Conclusions on IAS 41 *Agriculture*.

Background and introduction

3. The Board is considering whether it can simplify the calculation of value in use in the IAS 36 impairment testing model without making the impairment test less robust.

4. In calculating value in use, IAS 36 requires an entity:

   (a) not to include income tax receipts or payments in estimates of future cash flows, ie to estimate cash flows on a pre-tax basis (paragraphs 50 and 51 of IAS 36); and

   (b) to use a pre-tax discount rate (paragraph 55 of IAS 36).

5. IAS 36 also requires an entity to disclose the pre-tax discount rate(s) applied to the cash flow projections (paragraph 134(d)(v) of IAS 36).

6. It is important to bear in mind that the taxes referred to in the terms ‘pre-tax’ and ‘post-tax’ refer to income taxes payable by an entity on the income generated by its assets and not to the income taxes payable by a provider of finance (ie a lender or an equity shareholder) on income earned (ie interest or dividends) by that provider of finance from the entity.

7. During and after the Post-implementation Review (PIR) of IFRS 3 *Business Combinations*, several stakeholders—preparers, investors, valuation experts and members of the Board’s consultative groups—have said that a pre-tax discount rate is hard to understand and does not provide useful information as that rate is not observable and is generally not used for valuation purposes. Current value of an asset is regarded and understood as a post-tax measure.

8. In practice, when valuing an asset using a discounted cash flow technique, income taxes payable on the income generated by the asset are deducted in deriving the cash flows available to the providers of finance. Similarly, the discount rate used

for any valuation is a post-tax rate that reflects the return that a provider of finance would require for investing in an asset that generates cash flows of specified amounts, timing and risk profile. This is also the case when determining recoverable amount for the purposes of IAS 36.

9. Having determined the recoverable amount using post-tax inputs (ie post-tax cash flows and a post-tax discount rate), to comply with the disclosure requirement in IAS 36, entities calculate the pre-tax discount rate as the rate that is needed to discount pre-tax cash flows in order to reach the same value as calculated by discounting post-tax cash flows using the post-tax discount rate (see example in paragraph BCZ85 of the Basis for Conclusions on IAS 36 [reproduced in *Appendix A*]). In other words, the pre-tax discount rate is not an independent input in calculating value in use but simply a number derived from discounted cash flow calculations that are, in practice, performed using post-tax inputs. Disclosure of such computed pre-tax rate does not provide useful information because it is not the input that was used in computing the recoverable amount of an asset (or a cash-generating unit), and because users are not interested in that rate for the reasons explained in paragraph 7.

10. Consequently, many stakeholders have asked the Board to remove the requirements to calculate value in use using pre-tax inputs, and to disclose the pre-tax discount rate.

Previous feedback on the use of pre-tax inputs

11. The feedback set out in paragraphs 7–10 is not new information for the Board.

12. In issuing a 2002 Exposure Draft of proposed revisions to IAS 36, the Board did not reconsider the requirements in IAS 36 on the use of pre-tax inputs. However, the Board received feedback from field visit participants and respondents to the Exposure Draft on that requirement. After considering the feedback, the Board decided to retain the requirement in IAS 36 to use pre-tax inputs. The feedback on the 2002 Exposure Draft and the Board's considerations in retaining the use of pre-tax inputs are set out in paragraphs BC90–BC94 of the Basis for Conclusions on IAS 36 (see *Appendix A* for extracts).

Basis in IAS 36 for requiring the use of pre-tax inputs

13. In issuing IAS 36, the International Accounting Standards Committee (IASC), the Board's predecessor, required the use of pre-tax inputs because the IASC observed that using post-tax inputs without specifying the tax attribute (ie the basis for computing the future tax cash flows) that an entity should reflect in value in use would cause double counting of future tax consequences of temporary differences. Moreover, if the tax attribute to be reflected in value in use is specified, the ensuing calculations would possibly be complex and burdensome. (See paragraphs BCZ81–BCZ84 of the Basis for Conclusions on IAS 36 [reproduced in *Appendix A*].)

14. Additionally, the IASC acknowledged an inconsistency in the measurement of deferred tax assets and liabilities—value in use would reflect the present value of any future tax cash flows that are included in the determination of value in use, whereas IAS 12 prohibits measuring deferred tax assets and liabilities on a discounted (present value) basis. (See paragraphs BCZ86–BCZ89 of the Basis for Conclusions on IAS 36 [reproduced in *Appendix A*].)

Staff analysis and conclusions

15. The staff analysis focuses on the issue of double counting of future tax consequences of temporary differences, as set out in paragraph 13. In paragraphs 16–26, the staff attempt to explain the double counting issue in detail compared to the IASC's considerations explained in paragraphs BCZ81–BCZ84 of the Basis for Conclusions on IAS 36.

What is the double counting issue?

16. An asset generates cash flows, and income, over its useful life. Income taxes are generally payable on that income. Although most of the future income tax that will be payable as a result of future income will be recognised as a current tax liability, and current tax expense, in the year when that income is recognised, IAS 12 requires future tax consequences of any temporary differences to be recognised as deferred tax assets or deferred tax liabilities when temporary

differences originate. Consequently, to avoid double counting, a current value (fair value or value in use) of an asset measured using post-tax inputs should reflect only those future tax consequences that are not already captured by recognising a deferred tax liability or deferred tax asset.

17. To understand the double counting issue, it is important to understand how future tax cash flows are normally computed and whether they are computed differently for value in use and fair value measured using present value techniques.[1]

18. The future tax cash flows are generally projected using estimates of current taxes payable in the respective years. Whether future tax cash flows will be computed in the same manner when measuring fair value and value in use will typically depend upon whether the asset being valued is a separately taxable incorporated entity.

Asset that is not an incorporated entity

19. If the asset being valued is not an incorporated entity, it is unlikely that future cash flows will be computed in the same manner when measuring fair value as when measuring value in use, for the following reason:

    (a) In measuring fair value, because fair value is an estimate of the price that a market participant would pay to buy the asset and the tax base of the asset to the market participant on initial recognition is normally equal to its cost, future tax cash flows would be computed on the basis that the tax base of the asset is equal to its fair value. In other words, the entity-specific tax base of the asset on the date of measurement is ignored when measuring fair value because, in most situations, that tax base differs from the tax base that would be available to a market participant acquiring the asset. Consequently, the fair value of an asset does not include any future tax consequences of any temporary difference because that fair value is determined on the assumption that the tax base of the asset on date of measuring fair value is equal to its fair value.

[1] Any reference to fair value in this paper should be read as fair value measured using present value technique.

(b) In contrast, because value in use is an entity-specific measure, and in the absence of explicit guidance on what tax attribute an entity should reflect in value in use, future tax cash flows would be computed using the actual entity-specific tax base of the asset. Consequently, value in use measured using post-tax inputs reflects future tax consequences of any temporary difference between the entity-specific tax base of the asset and its value in use. Applying IAS 12, the entity would also recognise a deferred tax asset or deferred tax asset liability on the temporary difference, causing double counting—ie the future tax consequences of any temporary difference are recognised in value in use and also as a deferred tax asset or liability.

20. Consider the example in *Appendix B* that illustrates paragraphs 19. The following table summarises pertinent information (all amounts in local currency units (CU):

Amounts at the end of 20X0	
– Carrying amount of the asset before impairment testing	1,800
– Tax base of the asset	1,200
– Fair value	1,715
– Value in use	1,632

21. Assuming that costs of disposal are negligibly small, if fair value less costs of disposal was used as the basis for determining recoverable amount, the entity would recognise the following amounts in its financial statements for 20X0:

	CU
Carrying amount of the asset before impairment	1,800
Fair value of the asset	(1,715)
Impairment loss recognised in profit or loss	85
Carrying amount of the asset presented in the statement of financial position at the end of 20X0	1,715
Tax base of the asset at the end of 20X0	(1,200)
Taxable temporary difference	515
Deferred tax liability presented in the statement of financial position at the end of 20X0 [calculated as 20% of the taxable temporary difference]	103

22. Fair value is measured on the basis that the tax base of the asset is equal to its fair value of CU1,715. Consequently, fair value does not reflect the future tax consequences of any temporary difference because no such difference exists for a market participant buying the asset. The tax consequences of the taxable temporary difference arising because of the difference between the fair value of the asset and the entity-specific tax base of the asset is recognised in the entity's financial statements applying IAS 12. Consequently, there is no double counting of any tax consequences.

23. If value in use was used as the basis for determining recoverable amount, the entity would recognise the following amounts in its financial statements for 20X0:

	CU
Carrying amount of the asset before impairment	1,800
Value in use of the asset	(1,632)
Impairment loss recognised in profit or loss	168
Carrying amount of the asset presented in the statement of financial position at the end of 20X0	1,632
Tax base of the asset at the end of 20X0	(1,200)
Taxable temporary difference	432
Deferred tax liability presented in the statement of financial position at the end of 20X0 [calculated as 20% of the taxable temporary difference]	86

24. Value in use is measured on the basis that the tax base of the asset is CU1,200. Consequently, future tax consequences of the temporary difference arising from the difference between value in use of the asset and its tax base are reflected in the future tax cash flows, and thereby, in value in use. Applying IAS 12, the entity would also recognise a deferred tax liability on the temporary difference, leading to double counting—ie the future tax consequences of the temporary difference are recognised both as part of value in use and as a deferred tax liability.

Asset that is an incorporated entity

25. If the asset is an incorporated entity, in most situations, the tax bases of the assets within that entity remain unchanged when the entity is bought. This means that the tax base of assets would be the same for both a market participant and the

reporting entity (the existing holder of the asset). Consequently, it is likely that the future tax cash flows would be computed in the same manner when measuring fair value as when measuring value in use.

26. Nonetheless, in the context of testing that asset (the incorporated entity—which could be a cash-generating unit) for impairment, this does not automatically lead to double counting of future tax consequences of the temporary differences associated with the underlying assets. This is because paragraph 105 of IAS 36 states that in allocating an impairment loss for a cash-generating unit to the individual assets in the unit, the carrying amount of an individual asset should not be reduced below the highest of (a) its fair value less costs of disposal, (b) its value in use and (c) zero.

Possible approaches that the Board could consider

27. The Board could consider the following approaches in response to the stakeholder feedback on using pre-tax inputs in calculating value in use:

    (a) retain the current requirement to use pre-tax inputs;

    (b) remove the explicit requirement in IAS 36 to use pre-tax inputs in calculating value in use; or

    (c) in addition to removing the explicit requirement in IAS 36 to use pre-tax inputs, specify what tax attribute should be reflected in value in use.

Retaining the requirement to use pre-tax inputs

28. Retaining the current requirement to use pre-tax inputs may not be a helpful course of action for the following reasons:

    (a) a pre-tax discount rate is not generally observable. It is generally derived by first discounting post-tax cash flows using a post-tax discount rate to determine a present value, and then using reverse engineering (back solving) to find the pre-tax discount rate that must be applied to the pre-tax cash flows to obtain the same present value; and

(b) as a consequence of (a), using pre-tax inputs does not necessarily help in resolving the double counting issue unless the definition of value in use is made sufficiently precise to give a definitive answer to the question of what tax attribute an entity should reflect in value use (also see paragraphs 35–42).

29. As mentioned previously, in practice current value of an asset is generally regarded and understood as a post-tax measure; and when valuing an asset using discounted cash flow techniques, post-tax cash flows are discounted using a post-tax discount rate. However grossing up the projected cash flows from post-tax cash flows to pre-tax cash flows should not cause the current value of the asset to change because the effect of grossing up cash flows should be offset by increase in the discount rate. This is somewhat similar to how discounting risk-adjusted cash flows with discount rate not adjusted for risks and discounting cash flows not adjusted for risk with risk-adjusted discount rate should produce the same current value.

30. In paragraph BC94 of the Basis for Conclusions on IAS 36, the Board observed that, conceptually, discounting post-tax cash flows at a post-tax discount rate and discounting pre-tax cash flows at a pre-tax discount rate should give the same result, as long as the pre-tax discount rate is the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows.

31. Consequently, there is no convincing argument for retaining the requirement to use pre-tax inputs.

Remove the explicit requirement to use pre-tax inputs

32. Following from the analysis in paragraphs 28–31, a simple course of action would be to:

(a) remove the explicit requirement in IAS 36 to use pre-tax inputs for calculating value in use;

(b) not specify in IAS 36 whether pre-tax inputs or post-tax inputs should be used in calculating value in use, but instead specify that assumptions about cash flows and discount rates must be internally consistent—post-tax cash flows should be discounted using a post-tax discount rate

and pre-tax cash flows should be discounted at a rate consistent with those cash flows; and

(c) require an entity to disclose the discount rate(s) actually used.

33. This approach would make calculating value in use applying IAS 36 consistent with the requirements in IFRS 13 *Fair Value Measurement* for determining fair value (and hence for determining fair value less costs of disposal).[2] It would also be consistent with the removal from IAS 41 of a reference to pre-tax discount rates in 2008 (see paragraphs BC5–BC6 of the Basis for Conclusions on IAS 41 [reproduced in *Appendix C*]).

34. The Board could pursue this approach even if the Board does not wish to consider providing explicit guidance on what tax attribute an entity should reflect in value in use. In doing so, the Board could consider proceeding straight to an Exposure Draft proposing amendments to IAS 36. The proposed amendments are likely to be supported by all the stakeholders who provided feedback during and after the PIR of IFRS 3 on the use of pre-tax inputs in calculating value in use of an asset.

Specify what tax attribute should be reflected in value in use

35. In addition to removing the explicit requirement to use pre-tax inputs, the Board could consider providing explicit guidance on what tax attribute an entity should reflect in value in use of an asset in order to avoid the double counting issue.

36. To avoid double counting, the tax attribute that should be reflected in value in use should be defined in a manner somewhat analogous to the tax attribute that is reflected in fair value. In other words, in calculating value in use, if the future tax cash flows are estimated on the basis that the tax base of the asset is equal to the measurement being calculated (in the case, the value in use of the asset), the double counting issue could be avoided.

37. To illustrate this, continuing the example in *Appendix B* and the analysis in paragraphs 20–24, the actual tax base of CU1,200 would not be used as the basis

[2] Appendix B of IFRS 13 provides application guidance on present value techniques. IFRS 13 does not specify whether an entity should use pre-tax or post-tax inputs in measuring fair value. Instead, the Standard specifies that assumptions about cash flows and discount rates should be internally consistent. After-tax cash flows should be discounted using an after-tax discount rate. Pre-tax cash flows should be discounted at a rate consistent with those cash flows. (See paragraph B14 of IFRS 13.)

for computing tax cash flows in measuring value in use. Instead, the future tax cash flows and, consequently, value in use, would be computed in a manner somewhat analogous to their computation in fair value—ie the future tax cash flows that would result if the tax base of the asset were equal to the current value being measured. In that example, the value in use would be CU1,715 and the tax cash flows would be calculated as if the tax base were also CU1,715. In consequence, there will not be any double counting of future tax consequences of the taxable temporary difference of CU515 (CU1,715 – CU1,200). The revised calculation of value in use is as follows:

		20X1	20X2	20X3	20X4	20X5
(a)	Pre-tax cash flows	800	600	500	200	100
(b)	Deduction of the cost of the asset [Depreciation for 20X1 = (g) x 40%]	686	412	247	148	222
(c)	Tax cash flows [[(a) – (b)] x 20%]	23	38	51	10	(24)
(d)	Post-tax cash flows [(a) – (c)]	777	562	449	190	124
(e)	Discounting factor at 10% [$1/1.1^n$]	0.909	0.826	0.751	0.683	0.621
(f)	Discounted post-tax cash flows [(d) ÷ (e)]	706	465	338	129	77
(g)	Value in use at the end of 20X0 [Σ(f)]					1,715

(It is only coincidental that in this example the value in use of the asset as calculated above is equal to its fair value.)

38. In relation to assets for which the tax base is zero because the cost of the asset cannot be deducted for tax purposes, future tax cash flows for both fair value and value in use would be measured using the asset's actual tax base of zero—which is the tax base that would be available to both a market participant buying the asset and the reporting entity (the existing holder of the asset). IAS 12 prohibits recognition of deferred tax assets or liabilities in such situations except for assets acquired in a business combination.

39. The IASC in 1996 and the Board when revising IAS 36 in 2004 decided not to specify what tax attribute an entity should reflect in value in use.

40. The IASC observed that it may be burdensome to estimate the future tax cash flows that would result if the tax base of the asset is equal to its value in use because it would involve an iterative and possibly complex computation (see paragraph BCZ84 of the Basis for Conclusions on IAS 36 [reproduced in *Appendix A*]). However, the staff think that the same iterative and possibly complex computations would likely be required in measuring fair value.

41. In 2004, the Board decided not to try to resolve the double counting issue as part of the Business Combinations project, and instead to consider it as part of its conceptual project on measurement.

42. The Board could consider resolving the double counting issue as part of this research project. However, this approach would require an extensive analysis of the interaction between IAS 36 and IAS 12 in a variety of possible circumstances. Consequently, this approach may not meet the simplification objective of the research project and is likely to increase the costs and complexity of determining recoverable amount.

Staff recommendation

43. The staff recommend that the Board consider removing the explicit requirement in IAS 36 to use pre-tax inputs in calculating value in use, and instead require an entity:

    (a) to use internally consistent assumptions about cash flows and discount rate; and

    (b) to disclose the discount rate(s) actually used.

Inconsistency in measurement of deferred tax assets and deferred tax liabilities

44. As explained in paragraph 14, the IASC acknowledged an inconsistency in the measurement of deferred tax assets and liabilities—value in use would reflect the present value of any future tax cash flows that are included in the determination of value in use, whereas IAS 12 prohibits measuring deferred tax assets and liabilities on a discounted (present value) basis. (See paragraphs BCZ86–BCZ89 of the Basis for Conclusions on IAS 36 [reproduced in *Appendix A*].)

45. Continuing the example in *Appendix B* and the analysis in paragraph 24, the future tax consequences of the taxable temporary difference of CU432 (see the table in paragraph 23) are recognised both as part of value in use and as a deferred tax liability. However, the value in use would include the discounted value of the future tax consequences of CU432 whereas the recognised deferred tax liability of CU86 is an undiscounted amount.

46. The inconsistency arising by not discounting deferred tax assets and liabilities can be resolved only through a fundamental reconsideration of IAS 12. Reconsidering the requirements in IAS 12 is outside the scope of this research project. Consequently, the staff is not considering developing any possible approaches to resolve the issue.

47. Furthermore, the question whether deferred tax assets and deferred tax liabilities should be discounted is independent of whether pre-tax inputs or post-tax inputs should be used in calculating value in use. Consequently, the staff recommendation in paragraph 43 would not exacerbate this issue.

Question for the Board

Which of the following courses of action does the Board wish to pursue?

1. retain the current requirement in IAS 36 to use pre-tax inputs.
2. remove the explicit requirement in IAS 36 to use pre-tax inputs in calculating value in use.
3. in addition to removing the explicit requirement in IAS 36 to use pre-tax inputs, specify what tax attribute should be reflected in value in use.

Appendix A
Extracts from the Basis for Conclusions on IAS 36

Income taxes

Consideration of future tax cash flows

BCZ81 Future income tax cash flows may affect recoverable amount. It is convenient to analyse future tax cash flows into two components:

(a) the future tax cash flows that would result from any difference between the tax base of an asset (the amount attributed to it for tax purposes) and its carrying amount, after recognition of any impairment loss. Such differences are described in IAS 12 *Income Taxes* as 'temporary differences'.

(b) the future tax cash flows that would result if the tax base of the asset were equal to its recoverable amount.

BCZ82 For most assets, an enterprise recognises the tax consequences of temporary differences as a deferred tax liability or deferred tax asset in accordance with IAS 12. Therefore, to avoid double-counting, the future tax consequences of those temporary differences—the first component referred to in paragraph BCZ81—are not considered in determining recoverable amount (see further discussion in paragraphs BCZ86–BCZ89).

BCZ83 The tax base of an asset on initial recognition is normally equal to its cost. Therefore, net selling price[28] implicitly reflects market participants' assessment of the future tax cash flows that would result if the tax base of the asset were equal to its recoverable amount. Therefore, no adjustment is required to net selling price to reflect the second component referred to in paragraph BCZ81.

28 In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

BCZ84 In principle, value in use should include the present value of the future tax cash flows that would result if the tax base of the asset were equal to its value in use—the second component referred to in paragraph BCZ81. Nevertheless it may be burdensome to estimate the effect of that component. This is because:

(a) to avoid double-counting, it is necessary to exclude the effect of temporary differences; and

(b) value in use would need to be determined by an iterative and possibly complex computation so that value in use itself reflects a tax base equal to that value in use.

For these reasons, IASC decided to require an enterprise to determine value in use by using pre-tax future cash flows and, hence, a pre-tax discount rate.

Determining a pre-tax discount rate

BCZ85 In theory, discounting post-tax cash flows at a post-tax discount rate and discounting pre-tax cash flows at a pre-tax discount rate should give the same result, as long as the pre-tax discount rate is the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows. The pre-tax discount rate is not always the post-tax discount rate grossed up by a standard rate of tax.

Example

This example illustrates that a post-tax discount rate grossed-up by a standard rate of tax is not always an appropriate pre-tax discount rate.

At the end of 20X0, the carrying amount of an asset is 1,757 and its remaining useful life is 5 years. The tax base in 20X0 is the cost of the asset. The cost is fully deductible at the end of 20X1. The tax rate is 20%. The discount rate for the asset can be determined only on a post-tax basis and is estimated to be 10%. At the end of 20X0, cash flow projections determined on a pre-tax basis are as follows:

		20X1	20X2	20X3	20X4	20X5
(1)	Pre-tax cash flows (CF)	800	600	500	200	100

Value in use determined using post-tax cash flows and a post-tax discount rate

End of 20X0		*20X1*	*20X2*	*20X3*	*20X4*	*20X5*
(2)	*Deduction of the cost of the asset*	*(1,757)*	*–*	*–*	*–*	*–*
(3)	*Tax CF [((1) – (2)) × 20%]*	*(191)*	*120*	*100*	*40*	*20*
(4)	*Post-tax CF [(1) – (3)]*	*991*	*480*	*400*	*160*	*80*
(5)	*Post-tax CF discounted at 10%*	*901*	*396*	*301*	*109*	*50*
Value in use [Σ(5)] =						*1,757*

Value in use determined using pre-tax cash flows and a pre-tax discount rate (determined by grossing-up the post-tax discount rate)

Pre-tax discount rate (grossed-up) [10%/(100% – 20%)] 12.5%

End of 20X0		*20X1*	*20X2*	*20X3*	*20X4*	*20X5*
(6)	*Pre-tax CF discounted at 12.5%*	*711*	*475*	*351*	*125*	*55*
Value in use [Σ(6)] =						*1,717*

Determination of the 'real' pre-tax discount rate

A pre-tax discount rate can be determined by an iterative computation so that value in use determined using pre-tax cash flows and a pre-tax discount rate equals value in use determined using post-tax cash flows and a post-tax discount rate. In the example, the pre-tax discount rate would be 11.2%.

End of 20X0		*20X1*	*20X2*	*20X3*	*20X4*	*20X5*
(7)	*Pre-tax CF discounted at 11.2%*	*718*	*485*	*364*	*131*	*59*
Value in use [Σ(7)] =						*1,757*

The 'real' pre-tax discount rate differs from the post-tax discount rate grossed-up by the standard rate of tax depending on the tax rate, the post-tax discount rate, the timing of the future tax cash flows and the useful life of the asset. Note that the tax base of the asset in this example has been set equal to its cost at the end of 20X0. Therefore, there is no deferred tax to consider in the balance sheet.

Interaction with IAS 12

BCZ86 IAS 36 requires that recoverable amount should be based on present value calculations, whereas under IAS 12 an enterprise determines deferred tax assets and liabilities by comparing the carrying amount of an asset (a present value if the carrying amount is based on recoverable amount) with its tax base (an undiscounted amount).

BCZ87 One way to eliminate this inconsistency would be to measure deferred tax assets and liabilities on a discounted basis. In developing the revised version of IAS 12 (approved in 1996), there was not enough support to require that deferred tax assets and liabilities should be measured on a discounted basis. IASC believed there was still not consensus to support such a change in existing practice. Therefore, IAS 36 requires an enterprise to measure the tax effects of temporary differences using the principles set out in IAS 12.

BCZ88 IAS 12 does not permit an enterprise to recognise certain deferred tax liabilities and assets. In such cases, some believe that the value in use of an asset, or a

cash-generating unit, should be adjusted to reflect the tax consequences of recovering its pre-tax value in use. For example, if the tax rate is 25 per cent, an enterprise must receive pre-tax cash flows with a present value of 400 in order to recover a carrying amount of 300.

BCZ89 IASC acknowledged the conceptual merit of such adjustments but concluded that they would add unnecessary complexity. Therefore, IAS 36 neither requires nor permits such adjustments.

Comments by field visit participants and respondents to the December 2002 Exposure Draft

BC90 In revising IAS 36, the Board considered the requirement in the previous version of IAS 36 for:

(a) income tax receipts and payments to be excluded from the estimates of future cash flows used to measure value in use; and

(b) the discount rate used to measure value in use to be a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted.

BC91 The Board had not considered these requirements when developing the Exposure Draft. However, some field visit participants and respondents to the Exposure Draft stated that using pre-tax cash flows and pre-tax discount rates would be a significant implementation issue for entities. This is because typically an entity's accounting and strategic decision-making systems are fully integrated and use post-tax cash flows and post-tax discount rates to arrive at present value measures.

BC92 In considering this issue, the Board observed that the definition of value in use in the previous version of IAS 36 and the associated requirements on measuring value in use were not sufficiently precise to give a definitive answer to the question of what tax attribute an entity should reflect in value in use. For example, although IAS 36 specified discounting pre-tax cash flows at a pre-tax discount rate—with the pre-tax discount rate being the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows—it did not specify which tax effects the pre-tax rate should include. Arguments could be mounted for various approaches.

BC93 The Board decided that any decision to amend the requirement in the previous version of IAS 36 for pre-tax cash flows to be discounted at a pre-tax discount rate should be made only after the Board has resolved the issue of what tax attribute should be reflected in value in use. The Board decided that it should not try to resolve this latter issue as part of the Business Combinations project—decisions on the treatment of tax in value in use calculations should be made only as part of its conceptual project on measurement. Therefore, the Board concluded it should not amend as part of the current revision of IAS 36 the requirement to use pre-tax cash flows and pre-tax discount rates when measuring value in use.

BC94 However, the Board observed that, conceptually, discounting post-tax cash flows at a post-tax discount rate and discounting pre-tax cash flows at a pre-tax discount rate should give the same result, as long as the pre-tax discount rate is the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows. The pre-tax discount rate is generally not the post-tax discount rate grossed up by a standard rate of tax.

…

Appendix B
Example illustrating the effect of future tax cash flows on current value of an asset

Facts

[All amounts in local currency units (CU)]

At the end of 20X0, the carrying amount of an asset is CU1,800, its tax base is CU1,200 and its remaining useful life is 5 years. Depreciation for tax purposes is allowed at 40% on written down tax base of the asset. The tax rate is 20%. The discount rate for the asset can be determined only on a post-tax basis and is estimated to be 10%. At the end of 20X0, cash flow projections determined on a pre-tax basis are as follows:

		20X1	20X2	20X3	20X4	20X5
(a)	Pre-tax cash flows	800	600	500	200	100

For simplicity, all inputs other than tax cash flows are assumed to be the same for measuring both fair value and value in use.

Measuring fair value and value in use

Fair value

Measuring fair value will involve an iterative computation so that future tax cash flows are estimated on the basis that tax base of the asset is equal to its fair value. The calculations are as follows:

		20X1	20X2	20X3	20X4	20X5
(a)	Pre-tax cash flows	800	600	500	200	100
(b)	Deduction of the cost of the asset [Depreciation for 20X1 = (g) x 40%]	686	412	247	148	222
(c)	Tax cash flows [[(a) – (b)] x 20%]	23	38	51	10	(24)
(d)	Post-tax cash flows [(a) – (c)]	777	562	449	190	124
(e)	Discounting factor at 10% [1/1.1^n]	0.909	0.826	0.751	0.683	0.621
(f)	Discounted post-tax cash flows [(d) ÷ (e)]	706	465	338	129	77
(g)	Fair value at the end of 20X0 [Σ(f)]					1,715

Value in use

In determining value in use, future tax cash flows are estimated using the entity-specific tax base (CU1,200) of the asset. Consequently, future tax consequences of the temporary difference at the end of 20X0 are reflected in value in use. The calculations are as follows:

		20X1	20X2	20X3	20X4	20X5
(a)	Pre-tax cash flows	800	600	500	200	100
(b)	Deduction of the cost of the asset [Depreciation for 20X1 = CU1,200 x 40%]	480	288	173	104	156
(c)	Tax cash flows [[(a) – (b)] x 20%]	64	62	65	19	(11)
(d)	Post-tax cash flows [(a) – (c)]	736	538	435	181	111
(e)	Discounting factor at 10% [$1/1.1^n$]	0.909	0.826	0.751	0.683	0.621
(f)	Discounted post-tax cash flows [(d) ÷ (e)]	669	444	327	123	69
(g)	Value in use at the end of 20X0 [Σ(f)]					1,632

Appendix C
Extracts from the Basis for Conclusions on IAS 41

Recognition and measurement—2008 amendments

Discount rate (paragraph 20)

BC5 As part of the annual improvements project begun in 2007, the Board reconsidered whether it is appropriate to require a pre-tax discount rate in paragraph 20 when measuring fair value.[2] The Board noted that a fair value measurement should take into account the attributes, including tax attributes, that a market participant would consider when pricing an asset or liability.

2 IFRS 13 *Fair Value Measurement*, issued in May 2011, defines fair value and contains the requirements for measuring fair value.

BC6 The Board noted that a willing buyer would factor into the amount that it would be willing to pay the seller to acquire an asset (or would receive to assume a liability) all incremental cash flows that would benefit that buyer. Those incremental cash flows would be reduced by expected income tax payments using appropriate tax rates (ie the tax rate of a market participant buyer). Accordingly, fair value takes into account future income taxes that a market participant purchasing the asset (or assuming the liability) would be expected to pay (or to receive), without regard to an entity's specific tax situation.[3]

3 IFRS 13, issued in May 2011, defines fair value and contains the requirements for measuring fair value.