



# **Commonwealth Grants Commission**

**DISCUSSION PAPER CGC 2002/26**

## **DEBT CHARGES**

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## INTRODUCTION

### *Synopsis*

1. The Debt Charges assessment is complex and much criticised. This paper outlines the purpose of the assessment and the assessment options available. It discusses the benefits and disadvantages of each option. Despite significant discussion and analysis by the Working Party<sup>1</sup> and the contribution of the consultants<sup>2</sup>, there is no consensus at present on how debt charges needs should be measured. It is a difficult assessment to resolve because it involves conceptual issues about which there is some legitimate disagreement. In this respect, it contrasts with the Depreciation assessment where the major points of disagreement could, in principle, be resolved by evidence.

2. The Commission's objective for the October Conference is to settle the question of which approach to use for the 2004 Review. After reviewing the options and the views put by the Working Party, the Commission believes the current approach, with some improvements, best reflects the principles which the assessment seeks to implement. The reasons for this position are discussed below.<sup>3</sup>

### *Conceptual Basis of the Debt Charges Assessment*

3. In the 1999 Review, the Commission introduced an assessment of capital related needs. However, it considered that needs should be limited to their operating or recurrent impact. This was in line with the Commission's general approach of establishing the scope of equalisation on the basis of States' operating statements.

4. Broadly speaking, the current Debt Charges assessment aims to equalise States' needs for debt charges through an assessment of the volume and unit cost of borrowing required to fund the standardised level of capital stock a State needs to provide a standardised level of recurrent services.

5. In forming its view of the objective of the Debt Charges assessment for the 2004 Review, the Commission referred to the 'three pillars' that underlie horizontal fiscal equalisation — capacity equalisation, internal standards and policy neutrality. In the case of capital, it asked:

- (i) do we need to recognise States' capacity to fund assets used in service provision, and if so;

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<sup>1</sup> The Depreciation and Debt Charges Working Party of Commission and State Treasury officers which reported to the Commission in July 2002.

<sup>2</sup> Emcorp Pty Ltd and Dakima Consulting Pty Ltd.

<sup>3</sup> The Commission arrived at this position for conceptual reasons. However, it notes that most of the alternatives do not appear to simplify the assessment significantly.

- (ii) what capital costs are incurred by States ('what do States do?'); and
- (iii) how can these costs be assessed in a policy neutral way?

6. In response to these questions, and in the light of the work of the Working Party (see below), the Commission has taken the view that:

- (i) it is important to include the cost of using assets in the scope of equalisation;
- (ii) on an annual basis, the costs incurred are depreciation<sup>4</sup> and debt charges; and
- (iii) the approach chosen to assess debt charges needs should take account of disabilities faced by States, such as:
  - differentials in the costs of borrowing (interest rates outside States' control); and
  - differential borrowing needs resulting from different needs for new capital, and different levels of capital grants and capital receipts;

in a policy neutral way.

### ***Depreciation and Debt Charges Working Party***

7. The Commission has had a Debt Charges assessment for many years. For the 1999 Review, a working party of Commission and State Treasury officers was formed to examine this assessment as well as the possibility of introducing an assessment of depreciation expenses.

8. After the 1999 Review, the States agreed to continue with the working party process to give further consideration to the assessment of depreciation and debt charges expenses. This reflected widespread dissatisfaction with the assessments. The Working Party met three times and States' views were presented orally and in writing. Consultants were engaged to assist the Working Party.

9. Unlike the Depreciation category, where there was broad conceptual agreement, the very foundations of the Debt Charges assessment were under scrutiny — even the most fundamental issue of what was being measured was a matter of contention.

10. The major issue to be resolved was what was being measured. The current assessment attempts to equalise the need for debt charges through:

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<sup>4</sup> Depreciation is assessed separately from debt charges. See Discussion Paper CGC 2002/25.

an assessment of the volume and unit cost of borrowing required to fund the standardised level of capital stock each State needs to provide a standardised level of recurrent services.

This view is also reflected in a proposed alternative assessment by the consultants who would apply a standard debt to assets ratio to each State's standardised capital stock.

11. Western Australia argued that it would be more meaningful to use the Debt Charges assessment to equalise the capacity of States to fund the full cost of holding assets, including the income foregone. This view is reflected in its preferred model, which uses holding costs. New South Wales expressed some support for a holding costs approach. Tasmania and the Northern Territory opposed the use of holding costs as the basis of the assessment and Victoria raised several concerns. The direct assessment of capital needs through capital expenditures was proposed as the benchmark for all other assessments — if States' capital and recurrent budget results were equalised, then full equalisation would be achieved whether this was done through operating budgets or economic costs.

12. The Working Party presented its report in July 2002. It included the options discussed below and the States' views of them. However, States have not yet had an opportunity to consider exactly how each of the approaches would be implemented.

13. This is a difficult area because it is possible to conceptualise the purpose of the assessment in different ways. Further, it can be a complex assessment because it needs to take account of a long period of time over which States have accumulated the debt on which they are paying debt charges. Data are of variable quality and disability factors hard to assess in retrospect. Finally, there is a need to consider how capital grants, other capital receipts, holdings of financial assets and recurrent budget results affect States' borrowing needs. The Commission appreciates the work undertaken by the Depreciation and Debt Charges Working Party to help clarify the issues.

### *Approach for the 2004 Review*

14. The Commission's view of capital expenses is that they should be included in the scope of equalisation. The costs that should be assessed are the annual expenses that impact directly on States' budgets. These are depreciation and interest expenses. In both cases, the assessment selected needs to take careful account of the disabilities facing States.

15. As noted in the body of this paper, the options presented by the Working Party meet these conditions to varying degrees.

### *Options*

16. The Commission has examined the options considered by the Working Party:
- Option 1 — holding costs and maintenance of net assets per capita;
  - Option 2 — holding costs;

- Option 3 — direct assessment of annual capital expenditure needs;
- Option 4 — equal per capita assessment;
- Option 5 — current approach with corrections as outlined below;  
and
- Option 6 — simplified Debt Charges assessment.

17. The Box following provides a brief description of the options requiring explanation. In weighing up each option the Commission has considered three key criteria based on the three pillars of equalisation:

- (i) does it reflect what States do;
- (ii) does it adequately recognise the disabilities States face in using assets in service provision on an annual basis; and
- (iii) is the assessment policy neutral?

18. It also had regard to:

- (i) the conceptual basis for the option;
- (ii) the views of the States;
- (iii) the simplicity of exposition (simplicity rather than transparency because a complex calculation may undermine transparency even when full documentation is made available); and
- (iv) the simplicity of calculation, level of data requirements, and availability of data.

### ***State Views***

19. Through the Working Party and in submissions, States have provided the Commission with very comprehensive views on matters relating to the Debt Charges assessment. This is a summary of their conclusions.

20. ***New South Wales.*** New South Wales would prefer to retain and correct the current approach (Option 5). It also saw merit in Option 2 — holding costs (with capital grants excluded from the debt base).

21. ***Victoria.*** Victoria preferred Option 4 (equal per capita assessment) followed by a variation of Option 6 (simplified assessment suggested by the consultants). It expressed the view that continuing with the current approach was not an option.

## **Explanation of Some Options**

### **Option 1            Holding costs and maintenance of net assets per capita**

This would be part of a comprehensive assessment of States' capital related needs which would cover depreciation, full holding costs of capital assets (both debt and equity funded), capital grants and States' net worth (per capita net asset value — both financial and non-financial). It is a different way of approaching the task, and broadens the concept of capital-related needs.

### **Option 3            Direct assessment of capital needs**

This option would assess States' capital needs annually. It would cover State capital expenditure needs (for replacement capital (a depreciation type assessment) and new capital) and State capacities to raise capital receipts. It would treat capital SPPs as being available to meet assessed needs. Debt Charges expenses would be largely assessed EPC as, except for differences in interest rates, any differences would be due to policy.

### **Option 5            The current method with modifications**

This approach would continue to assess capital-related needs through Depreciation and Debt Charges assessments. The Debt Charges assessment would use historical financial data to measure States' relative need to fund debt. As with other expenditure assessments, the assessment would be based on a combination of policy neutral measures of demand and differences between States in the unit cost.

In general terms, the relative demand for debt charges expenses would be arrived at by summing over 30 years States' adjusted capital and standardised operating budget deficits. This is the amount they must cover with borrowing. It would start with the total value of assets purchased over the last thirty years and subtract:

- depreciation;
- capital receipts; and
- capital grants; and add
- expenditure on financial assets.

The first three are available to fund asset purchases and the last may add to the borrowing needs. By accumulating over the period, the Commission would arrive at the value of purchased assets that may have required borrowing. For each of the thirty years, it would apply disability factors to arrive at each State's standardised need for non-financial assets, and then subtract its actual levels of capital grants. It would be left with a standardised net need for borrowing for capital assets.

The operating budget result for each of the last thirty years would also be added because of the impact it has had on the current level of borrowing (and therefore debt charges expenses). Surpluses are treated as reductions in the need for borrowing, deficits as additional needs for borrowing. The standard budget result calculated for each year in past Inquiries is used as States have been equalised for current activities already.

The allowance for differences in unit cost is then applied. It allows for differences in average interest rates experienced between the States due to their size in the market, and is adjusted by judgement to exclude policy influences that result in different credit ratings (interest rate variations) for different States.

The resulting adjusted net need for borrowing becomes the basis of the measure of States' relative per capita needs to fund debt charges.

### **Option 6            A Simplified approach**

This option would start with a calculation of the average extent to which State assets were funded by debt. It would adjust this for demand and unit cost differences in the same way as in Option 5 and arrive at each State's need to hold debt by applying the result for each State to the average per capita level of assets financed by debt.

22. **Queensland.** In November 2000, Queensland voiced major concerns with the current method and described the outcome of the assessments with respect to Queensland as counter-intuitive. In May 2002, it argued that the current volatility in the assessment did not seem reasonable, given that it reflected the recurrent impact of assets with long lives. However, Queensland's preferred option was to retain the current approach while addressing its shortcomings. It did not think the superiority of the proposed alternatives had been clearly demonstrated.

23. **Western Australia.** Western Australia provided analysis to show that there was a range of approaches to assessing capital that were equivalent in net present value terms, if implemented consistently over time. In its view, the particular approach was not so important — what was most important was that whatever approach was adopted should be based on a sound analytic framework and could be reliably quantified. It argued that the analytic approach was necessary to ensure that the detailed implementation of any broad approach actually achieved equalisation. Western Australia thought Option 1 the best in terms of simplicity, but did not exclude Option 3 (though less preferred on the grounds of volatility) or Option 5 (though this would need substantial change to achieve equalisation, and could be too complex). It thought Options 2, 4 and 6 did not achieve equalisation, but at least Option 4 was simple.

24. **South Australia.** South Australia supported further consideration of Option 6 (simplified Debt Charges assessment), with the netting of capital grants, and Option 2 (capital grants and holding costs). It opposed Option 5 (current approach), Option 1 (maintenance of net assets per capita) and Option 3 (direct assessment). It also opposed Option 6 if capital grants were not netted off.

25. **Tasmania.** In November 2000, Tasmania commented that it supported the conceptual basis of the Debt Charges assessment and was open to considering different approaches. It expressed a preference that assessments be as transparent as possible and commented that simplicity was a component of transparency. Tasmania supported the further development and exploration of Option 6, noting that it was simpler than the current approach and that it was likely to result in a smaller redistribution of funds. It did not support the current approach (Option 5), the maintenance of net assets per capita (Option 1) or holding costs (Options 1 and 2). It believed that the direct assessment of capital expenditure would be very complex and that this option should not be developed further at present.

26. **Northern Territory.** The Northern Territory supported Option 3 (direct assessment), followed by Option 5 (current approach). It supported the direct assessment of capital needs because of the extra costs it faces in providing capital. It argued that the volatility could be smoothed through the Commission's five-year averaging process. It noted that Option 3 may not be a viable choice for the 2004 Review. The Northern Territory opposed Option 6, and Option 2 if it netted capital grants.

## ISSUES

27. This section deals with some issues that relate to more than one option.

### ***Gross or Net Debt Charges Assessment***

28. A decision will need to be made on whether to assess debt charges on a gross or a net basis. Currently, interest payments are equalised in the Debt Charges assessment, and interest receipts are assessed in a separate revenue category called Interest Earnings, using the equal per capita method (EPC). Arguments in favour of netting are:

- (i) to an extent, States exercise choice over whether to hold a higher level of gross debt offset by a higher level of financial assets;
- (ii) other analyses of State debt (such as by rating agencies) refer to net debt, indicating its importance for State finances;
- (iii) all States hold interest-earning assets along with debt;
- (iv) States do not necessarily have the same capacity to raise revenue from interest earnings; and
- (v) if net expenditure were to become zero or negative, it could still be treated on an EPC basis.

29. It could also be argued that the current approach incorporates a grant design inefficiency because it provides an incentive for some States to hold higher levels of debt. However, the Commission is not aware of any evidence that such a practice occurs, and finds it unlikely that State policies would be organised to maximise their grants shares from the Debt Charges assessment.

30. On the other hand, it can be argued that the Commission should reflect the standard policy of the States, and that this policy is to hold financial assets as well as debt. It has been argued that netting should be avoided because interest receipts:

- (i) do not negate debt charges paid on borrowings;
- (ii) do not relate conceptually to the assets being used to provide services (to which most of debt charges relates); and
- (iii) will have different disability factors applied to them.

31. The States were divided in their response to this issue.

32. ***Victoria.*** Victoria supported the netting of interest receipts against interest expenses.

33. ***Queensland.*** Queensland said there should be greater consistency between the treatment of interest costs and receipts, and would support a net approach to interest.

34. **Western Australia.** Western Australia supported a net approach and argued that all assets and liabilities should be treated as significantly interchangeable.

35. **South Australia.** South Australia supported a net approach to interest, agreeing with the Consultants that it is essentially a matter of choice for States as to whether a higher or lower level of gross debt is held, offset by a higher or lower level of financial assets. To best overcome this policy difference, a net assessment is required.

36. **Tasmania.** Tasmania argued that netting falsely assumes that all States are subject to the same interest rates for both borrowings and investments. This assumption may benefit the larger States who may enjoy preferential rates. It also disputed that policy choices determine whether States hold financial assets or use them to offset debt because timing may dictate that financial assets be held for a period.

37. **Northern Territory.** The Northern Territory opposed the netting of interest, arguing that:

- (i) interest is frequently examined on a gross basis, with the total effect of interest payments on a Government's budget being the prime focus;
- (ii) netting interest would dilute the effect of interest rate disabilities; and
- (iii) where jurisdictions incur non-policy related disabilities in interest receipts, separate disabilities should be applied.

38. **Commission View.** The Commission is not inclined to favour assessing needs for net debt charges because:

- (i) it would not fully recognise the needs relating to debt charges paid on standardised borrowings; and
- (ii) interest costs and receipts are likely to be affected by different disabilities.

39. It is true that there is potential for a grant design effect because of the different treatment of interest payments and receipts. If interest is earned on financial assets that are held for policy reasons only, and the sale of these could in fact be used to retire debt, there is a case for assessing interest receipts on an actual per capita (APC) basis to recognise the full extent to which the receipts are available to meet assessed debt charges needs. If no disabilities influence a State's ability to earn interest, then they should be offset in full. However, it is reasonable to assume that a State will require a minimum amount of liquid assets for operational purposes. It may also be that some States, because of the size of their holdings, may be able to earn interest at higher rates. A case could be put that, once these needs are recognised, any remaining interest earnings should be assessed APC.

40. The Commission would welcome further State views on these issues.

### ***Treatment of Capital Expenditure on Financial Assets***

41. Financial assets are defined as holdings of cash and deposits, and equity in public trading enterprises (PTEs). A proportion of financial assets relates to the need for financial management.

42. Financial assets have a dual impact in relation to debt charges:

- (i) debt charges originating from borrowing for financial assets should not attract disabilities related to the need to borrow for non-financial assets (which is essentially Victoria's point about the content of the debt charges standard); and
- (ii) financial assets which are not held for management purposes are, in principle, available to meet some borrowing needs.

43. ***Appropriate disabilities.*** During its workplace discussions, Victoria noted that the debt charges standard included not only debt charges on borrowing for non-financial assets and budget outcomes but also on borrowing for financial assets. It argued that disabilities designed to apply to debt charges funding non-financial assets were also being applied to debt charges funding financial assets.

44. It is true that there is no component within the Debt Charges assessment that relates to debt charges on borrowings for financial assets. However, the Commission considers it unlikely that States have been borrowing to purchase financial assets at the same time that they are seeking to retire debt<sup>5</sup> to maintain their credit ratings. Equity in PTEs was probably 'purchased' in the past through capital expenditure on non-financial assets now owned by the PTEs. Some time in the future, it may be possible that States will borrow to purchase financial assets, as Victoria argued, 'to stay in the market'. The Commission does not believe that there was a problem with the assessment of past periods. However, it seeks evidence on why States are borrowing at present and will be doing so in the future.

45. The Commission is also considering an adjustment to the Debt Charges framework used in the current assessment to derive quantity of borrowing factors to ensure that, if States do borrow to fund financial assets, this is recognised and needs are appropriately determined. Similarly, the holding cost approach could be modified to include all assets in the assessment.

46. Debt charges arising from such activities should probably have no impact on a State's grant share. However, it is arguable that borrowings to fund equity in PTEs could be, at least to a significant extent, to support capital expenditure programs. Therefore, it is also arguable that a proportion of debt charges has been incurred from borrowing for

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<sup>5</sup> The Debt Charges standard has been consistently falling over recent years (it is now at about \$170 per capita) while the Interest Earnings standard (now at about \$150 per capita) has been somewhat erratic, probably reflecting the discontinuity caused by the move from a cash to an accrual based GFS and lack of comparability between the States and over time in what is included in the category.

financial assets and hence asset-related needs have been attached. There are possibly three options for dealing with this issue:

- (i) include the accumulated standard net per capita expenditure on financial assets in the calculation of standardised borrowing needs requirements, assuming no needs relate to PTE equity or they were recognised in past capital expenditure;
- (ii) discount the debt charges factor so it applies to the proportion of the debt charges standard that relates to borrowing for non-financial assets; or
- (iii) ignore this issue for the sake of simplicity.

47. GFS records capital expenditure and receipts relating to financial assets. However, a preliminary investigation suggests that the data may not be good enough to be used in the assessment. Therefore, the factors shown in Table A-3 (Attachment A) do not include this proposed adjustment. This issue will be investigated further.

48. As this issue has not been fully discussed through the Working Party process, the Commission asks for States' views on it before making a decision.

49. ***Substitutability.*** While, in principle, financial assets may be substitutable for non-financial assets, this should not be taken into account in the assessment because:

- (i) the current assessment takes into account the standard amount of substitution between financial and non-financial assets by subtracting from non-financial assets borrowing needs the standard amount of assets sales (this would include both financial and non-financial asset sales); and
- (ii) the States have little flexibility in terms of switching between financial and non-financial assets.

**OPTION 1**  
**HOLDING COSTS AND MAINTENANCE OF NET ASSETS PER CAPITA**  
**AND**  
**OPTION 2**  
**HOLDING COSTS**

50. These options are discussed together because the only issue of difference is the assessment for the maintenance of net assets per capita. They have raised a fundamental question — does the Commission wish to change its approach from assessing expenses to assessing conceptual costs? Option 1 also raises the question of whether to equalise the capacity of States to 'maintain their net assets per capita'.

### *Suggested Assessment*

51. **Option 1.** Western Australia proposed a comprehensive assessment of capital related needs, based on the economic cost of capital approach. As well as a depreciation assessment, it would include four elements instead of the single Debt Charges assessment. They are:

- (i) holding, or opportunity, costs of capital stock needed in the assessment year;
- (ii) interest charges on remaining debt (total debt less the value of capital stock required in the relevant year);
- (iii) an assessment of capital grants; and
- (iv) an assessment enabling States to maintain their per capita net assets (this can also be conceptualised as an assessment of holding benefits).

52. The first two components would replace the present Debt Charges assessment which calculates needs for debt charges based on an estimate of standardised net borrowing. The method proposed by Western Australia would split the debt charges standard into opportunity costs of holding assets and debt charges on the remaining debt.

53. Stock disabilities similar to those applied to depreciation expenses would be applied to the opportunity costs of holding assets as a State's need for assets would relate to its need for stock in the assessment year. The debt charges needs on remaining debt would be assessed as standard notional annual borrowings adjusted for the effects of capital grants and the like.

54. The assessment to enable States to 'maintain their per capita net assets' is said to be required to take account of the effect of population growth on the need for non-financial assets to provide services and on other components of net worth, including financial assets (including equity in public corporations) and superannuation liabilities. It is argued that as these are substitutable for State debt, the Commission should recognise the impact of population growth on these substitutes.

55. The assessment could be carried out either:

- (i) separately, by calculating the capital transfer necessary to maintain a standard EPC level of per capita net worth over time<sup>6</sup>; or
- (ii) within the Debt Charges framework, by calculating the interest cost on the accumulation of the capital transfers calculated in the first approach.

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<sup>6</sup> This is understood to mean that, if Western Australia's population doubles relative to the Australian standard, it would need more than its population share of non-replacement capital expenditure to catch up in terms of assets used in service provision. It would need twice what it had needed to spend over the preceding years.

56. Western Australia believed the first approach would be simpler because it would not require an historical series of net worth data or an interest rate adjustment.

57. This approach was opposed by South Australia because of the maintenance of net assets per capita aspect.

58. **Option 2.** This is similar to Option 1, but without the assessment for population growth. According to the consultants, it could be applied in two ways — with or without adjusting holding costs for capital grants.

59. New South Wales indicated its support for this approach (after Option 5). South Australia supported its further consideration. Western Australia opposed it.

### ***Merits of Holding Costs***

60. Holding costs would measure the full economic cost to a State of holding an asset by applying the real interest rate (nominal interest rate minus rate of inflation) to the value of standardised assets. The current approach covers only the cost of borrowing, but this would also cover the opportunity cost of owning an asset.

61. Western Australia pointed out that this concept is reflected by Governments in the use of capital use charges and depreciation, as well as in commercial decision-making. It also noted that the assessment would be simpler because an historical series of disabilities and accumulations by State would not be required.

62. South Australia supported the further consideration of this approach. It noted that the net impact of the notional holding cost can be tied back to actual budget results. The added notional expenditure item (interest holding cost) could be balanced by an added notional revenue item offsetting it, thus leaving the actual budget result unchanged. This may be the same concept as proposed by Western Australia in suggesting an assessment of 'remaining debt' which could have been negative.

63. New South Wales noted that the holding costs approach advocated by Western Australia would remove the incentive for States to fund capital purchases through debt rather than through recurrent surpluses, thus removing a grant design inefficiency

64. Several objections were raised to the application of holding costs. The consultants argued that:

- (i) holding costs do not affect a State's cost of providing services — the concept is not reflected in the financial practices of States or in commercial accounting practices;
- (ii) the current generation of State residents enjoy the benefits of a large excess of assets over liabilities, meaning that these assets have been purchased by past generations or Commonwealth taxpayers; and

- (iii) this approach might necessitate an off-setting ‘holding benefit’ to recognise the benefits conferred by assets that are fully owned (no outstanding loans).

65. Victoria questioned:

- (i) whether it would be appropriate to apply different costs to equity capital when States can raise equity capital through raising taxes;
- (ii) how the different costs of equity might be measured;
- (iii) how policy contamination might be avoided; and
- (iv) whether the cost of equity would rise as the debt to equity ratio increased.<sup>7</sup>

66. Queensland said that the economic cost of capital approach represented a significant departure from the basis of assessments in other areas of the equalisation budget, and that the advantages of this proposed departure had not been demonstrated.

67. The Northern Territory opposed the application of holding costs, arguing that a holding benefit would also need to be applied and that this approach would not reflect the financial or accounting practices of States.

68. The Commission considers a holding costs approach to be outside the scope of horizontal fiscal equalisation. Although economic costs are a useful management tool, they do not impact directly on States’ budgets. For this reason, several States and the consultants to the Working Party did not accept that the approach was consistent with all three of the key criteria set out in paragraph 17. The Commission does not believe that including holding costs in the assessment would deliver equalisation benefits.

### ***Merits of Maintenance of Net Assets Per Capita***

69. The advantage of this proposal is that it would allow the influence of population growth on assets to be recognised. The difficulty is in understanding how it might be implemented.

70. The proposal has been criticised as introducing double-counting. It was argued that the Depreciation assessment already allowed for the number of people who need to access services from a State government. While this is true, the depreciation assessment does not address Western Australia’s concern that per capita revenue raising capacity may decline with population growth.

71. At this stage, the Commission is not inclined to favour the introduction of a specific assessment to maintain net assets per capita because:

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<sup>7</sup> It is understood that these issues would be addressed through the use of a common interest rate adjusted for relevant disabilities.

- (i) the effects of population growth have been accounted for elsewhere in the assessment and including the maintenance of asset per capita assessment would result in double-counting; and
- (ii) the need to maintain net assets per capita and its relevance to horizontal fiscal equalisation has not been clearly demonstrated.

### ***Conclusion — Options 1 and 2***

72. At this stage, the Commission does not favour Option 1 or Option 2.

## **OPTION 3 DIRECT ASSESSMENT OF ANNUAL CAPITAL EXPENDITURE NEEDS**

### ***Suggested Assessment***

73. A direct assessment of capital needs would involve:

- (i) expanding the standard budget to include relevant capital expenditures and receipts;
- (ii) equalising the capital expenditures in that year; and
- (iii) treating debt charges on an EPC basis except for differences in borrowing costs.

74. This approach is based on the idea that if capital expenditure needs are equalised for the years of application, the need to assess debt charges needs differentially would be removed and an EPC assessment would be applied to it. However, an assessment of past debt charges (and depreciation) needs would still be required.<sup>8</sup>

75. The Northern Territory supported this approach and found some support from Western Australia (as well as concern at its potential volatility). South Australia opposed it.

### ***Merits of Direct Assessment***

76. By making the Debt Charges assessment unnecessary, it should simplify the Commission's assessments. However, a residual Debt Charges assessment would be required for capital purchases prior to 2004-05 and a residual Depreciation assessment

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<sup>8</sup> The option is actually a direct assessment of non-replacement capital needs, with the depreciation assessment taking account of States' different needs for funding replacement capital.

would also be required for equalisation to be achieved (unless they were ignored as a simplification).

77. This approach might result in a more accurate assessment of States' needs because it might make it easier to take account of influences such as:

- (i) overall population changes;
- (ii) population changes in particular groups; and
- (iii) intrastate migration.

78. Criticisms of this approach were that:

- (i) it is likely to be volatile because the depreciation approach smoothes fluctuations in needs — although the five year averaging process would smooth this to some extent;
- (ii) it may be difficult to develop and apply an accurate assessment — in particular, it would require new data from the States; and
- (iii) it does not remove the need for residual Depreciation and Debt Charges assessments — meaning that it would increase complexity in the short term.

79. This approach can be thought of as developing a more comprehensive capital needs assessment while (eventually) dropping the Debt Charges and Depreciation assessments. This means that there might be an improved capital needs assessment with no net increase in complexity in the long term. The major problems are likely to be data availability and the short term complexity resulting from the residual assessments of depreciation and debt charges. It would equalise the costs of using capital over time, but not within a year. This would not be consistent with the Commission's preference for using an operating cost framework for the assessment of needs.

80. This approach does not meet one of the key criteria stemming from the three pillars of fiscal equalisation. It does not recognise, on an annual basis, the disabilities States face in using assets in service provision.

81. In addition, this approach would increase the complexity of the capital related assessments because it would not remove the need to assess needs for debt charges from past borrowings. Therefore, the Commission would need to maintain a debt charges assessment for the 2004 Review.

### ***Conclusion — Option 3***

82. For the reasons outlined above, the Commission is not inclined to favour this proposal at this time.

## **OPTION 4 EQUAL PER CAPITA**

### *Suggested Assessment*

83. This approach would assess each State as having the same level of per capita need. Victoria expressed a preference for this approach.

### *Merits of an Equal Per Capita Approach*

84. The arguments for this approach are its simplicity and the difficulty the Commission faces in developing an accurate, comprehensive, and broadly understood and supported assessment. However, it fails to meet the criteria outlined earlier because it would not equalise for any different needs faced by the States.

### *Conclusion — Option 4*

85. The Debt Charges assessment is an important part of the equalisation process. By not recognising that States have different capacities to meet their debt charges, this approach does not implement fiscal equalisation.

86. Unless the Commission cannot develop an appropriate assessment, it would not favour Option 4.

## **OPTION 5 CURRENT APPROACH WITH CORRECTIONS**

### *Current Assessment*

87. The current Debt Charges assessment uses a budget deficit framework to quantify States' borrowing needs and costs. States need to borrow to fund their accumulated standardised budget deficits. The assessment equalises States' needs for debt charges through an assessment of the volume and unit cost of borrowing required to fund the standardised level of capital stock a State needs to provide a standardised level of recurrent services.

88. The Commission assesses disabilities for both demand and cost influences when estimating States' standardised expenditures on debt charges. A State's overall factor is calculated by multiplying its assessed demand factor by its cost factor. The two disabilities are defined as follows.

- (i) The demand disability reflects differences in the amounts States have had to borrow ('the debt quantity'). The debt charges framework is

used to calculate this quantity. It assumes that the quantity of debt needing to be held by a State depends on the accumulated standardised deficits<sup>9</sup> on State capital budgets, plus the accumulated standard deficits on operating budgets<sup>10</sup>.

- (ii) The cost disability reflects differences in the unit borrowing costs faced by the States, adjusted for policy differences. The disability is based on information available about interest rate charges and information on why interest rates differ between States.

89. The debt charges framework calculates States relative borrowing needs by deriving absolute borrowing needs resulting from the levels of States' capital related expenditure and revenue for each year of the accumulation period. This framework is applied to an historical series of data, currently from 1961-62 to the present, to reflect that States are incurring debt charges due to past borrowing needs.

90. The components used to derive the deficits in each year are standardised. Populations and disabilities<sup>11</sup> that are relevant to each year are used to standardise capital expenditures and depreciation. This approach is intended to convert the relevant stock disabilities from the depreciation assessment to a flow basis. Debt charges needs are calculated on a flow basis because the population characteristics and prices applying at the time capital assets are purchased are directly related to a State's debt charges expenses. Also, unlike the capital stock that it might have funded, debt incurred in past years is not re-valued.

91. New South Wales has expressed a preference to retain (and modify) this approach. Queensland also expressed support for it, arguing that the superiority of the alternatives had not been demonstrated. The Northern Territory supported this approach after Option 3. Western Australia saw some value in this approach, although it argued it would need substantial change to achieve equalisation, and could be too complex to reliably quantify. Victoria and South Australia expressed their opposition.

### ***Merits of the Current Assessment***

92. This approach meets the three key criteria.

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<sup>9</sup> The standardised deficit on the capital budget is calculated by:

- (i) calculating standardised capital expenditures (by multiplying the standard expenditure by the capital disabilities calculated in the Depreciation assessment [weighted by 0.75] and the general recurrent disabilities calculated for the review or update year [weighted by 0.25]); and
- (ii) subtracting funds available to fund those expenditures (including standardised depreciation, capital grants and other capital revenues).

<sup>10</sup> This includes the impact of standardised interest earnings (assessed EPC).

<sup>11</sup> Populations relevant to each year are used to calculate standard values for all components except capital grants. From 1991-92, the actual per capita amount each State received in the year is included for capital grants.

- (i) It equalises the capacity of States to meet their debt charges requirements. It considers annual expenses that impact directly on States' budgets and attempts to identify and equalise the disabilities facing States.
- (ii) It reproduces what States do. Using the concepts of normal financial reporting, it attempts to include all the components and influences that impact on a State's borrowing needs and costs.
- (iii) It is policy neutral because it models State borrowings based on the average experience of the eight States and does not allow the policies of an individual State to influence the size of that State's grant.

93. The weaknesses of this approach are its complexity and the large data requirements. It also results in a large grant redistribution which has been criticised as being counter-intuitive. The section below details some further problems that could be addressed through modifications to the current approach.

***Possible 'Corrections'***

94. The Working Party discussed a number of possible areas where this assessment could be improved. They are:

- (i) the assessment of needs on non-replacement capital expenditure;
- (ii) the treatment of land purchases;
- (iii) the treatment of pre 1993-94 depreciation;
- (iv) the treatment of interest receipts;
- (v) the treatment of expenditure on financial assets; and
- (vi) the treatment of capital receipts (interest receipts, sales of second-hand assets and other capital receipts).

95. ***Proposals.*** To deal with these issues, several changes to the assessment have been proposed. They are summarised in Table 1 with detailed explanations provided in Attachment A.

96. The Commission proposes to stop the current open-endedness of the accumulation period and set it at 30 years. This would reduce the complexity of the calculations required and is based on an assumption that debt would be repaid within thirty years.

### ***Conclusion — Option 5***

97. This approach has conceptual merit. However, it is acknowledged that the proposed changes would add to the complexity. While this is of considerable concern, the Commission believes that the benefits of a comprehensive and conceptually sound assessment are likely to outweigh the costs of complexity. Measures to reduce the model's complexity are being sought.

**Table 1** CURRENT AND CORRECTED  
DEBT CHARGES ASSESSMENT FRAMEWORK

Current Assessment	Corrected Assessment
Standard expenditure on non-replacement fixed assets, second-hand assets and land purchase <i>multiplied by</i>	A <b>Standard expenditure on non-replacement fixed assets and second-hand assets</b> <i>Minus</i>
Capital expenditure disability factor <i>Equals</i>	B <b>standard depreciation</b> <i>Multiplied by</i>
Per capita standardised expenditure on non-replacement fixed assets, second-hand assets and land purchase, which are accumulated	C <b>Non-replacement capital expenditure disability factor</b>  <i>Equals</i>
<i>Plus</i>	D <b>Per capita standardised non-replacement capital expenditures which are accumulated</b> <i>Plus</i>
Per capita accumulated standard other capital outlays <i>Minus</i>	E Per capita accumulated <b>land purchases</b> and other capital outlays <sup>(a)</sup> <i>Equals</i>
Per capita accumulated standardised / standard depreciation <i>Minus</i>	F <b>Per capita standardised expenditure on non-replacement capital, land and other capital outlays</b> <i>Minus</i>
Per capita accumulated actual capital grants received <i>Minus</i>	G Per capita accumulated actual capital grants received <i>Minus</i>
Per capita accumulated other capital receipts  <i>Minus</i>	H Per capita accumulated other capital receipts <sup>(a)</sup> <i>Plus</i> I <b>Net (of receipts) per capita standard accumulated expenditure on financial assets<sup>(a)</sup></b> <i>Minus</i>
Per capita accumulated recurrent budget result (including depreciation) <i>Equals</i>	J Per capita accumulated recurrent budget result (including depreciation) <sup>(a)</sup> <i>Equals</i>
Per capita standardised net borrowings <i>Divided by</i>	K Per capita standardised net borrowings <i>Divided by</i>
Standard net borrowings <i>Multiplied by</i>	L Standard net borrowings <i>Multiplied by</i>
Interest rate disability <i>Equals</i>	M Interest rate disability <i>Equals</i>
Per capita adjusted standardised net borrowings <i>Equals</i>	N Per capita adjusted standardised net borrowings <i>Equals</i>
Category disability factor	O Category disability factor

Note: (a) The amount for each State is the accumulation of Australian standard expenditure for each year of the accumulation period divided by the State population of the relevant assessment year.

## **OPTION 6 SIMPLIFIED DEBT CHARGES ASSESSMENT**

### ***Consultants' Suggested Approach***

98. The consultants suggested an approach that would involve a simplified Debt Charges assessment. The Commission would calculate the value of standardised non-financial assets based on States' current non-financial asset holdings<sup>12</sup>. Using debt figures provided by the ABS, it would then calculate a standard net debt to assets ratio. The calculation would include an adjustment for capital needs and interest costs as in the current assessment. Standardised debt figures and standardised interest payment figures could then be determined.

99. In arguing for this approach, the consultants said that State debt is determined by a range of current and past factors, including: budget policies; attitudes to privatisation; the degree of equalisation achieved in the past; and failed financial institutions. They said it would be impossible to take all of these factors into account in determining a standard State debt policy. Instead, the goal should be to select an approach that cut through the complexities to arrive at a meaningful measure — the debt to assets ratio.

100. Victoria expressed support for this approach (after Option 4). South Australia supported the further development of it, as long as it netted off capital grants (otherwise it opposed it). Tasmania also supported its further development. Western Australia and the Northern Territory opposed it.

### ***Merits of the Consultants' Model***

101. Option 6 defines equalisation as giving each State the same opportunity to pay debt charges on its standardised level of assets. It would be simpler than Option 5 because it would use more of a 'snapshot' to determine needs, rather than the flow approach of Option 5, and it may require less data. For example, the use of the standard debt to asset ratio would capture the standard level of capital receipts and operating budget outcome, which would eliminate the need for an historical accumulation of data.

102. Western Australia pointed out that the degree of equalisation would depend on the standard level of debt. For example, if the average level of debt were zero (or negative), no equalisation would take place. This could conceal a variation in circumstances between the States where some States had a high need to borrow. We agree that a zero level of standard debt could conceal important variations between States and potentially deprive an indebted State of the application of disabilities (more likely with a net assessment than a gross assessment). However, even if this were to be the case, this would be no different from a situation where the standard expenditure on any other function, say pre-schools, was zero.

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<sup>12</sup> The national average non-financial asset holding multiplied by relevant stock disability factors.

103. Western Australia pointed out that the degree of equalisation would also depend on portfolio management decisions by States. For example, if debt were eschewed in favour of using financial assets, this would constrict the degree of equalisation.

104. It noted that this method would not be equivalent in net present value terms to the direct assessment of capital. It said that this is demonstrated with the example of States having zero net debt, in which case no assessment would be made. However, this would ignore the return foregone from not investing the capital elsewhere.

105. The Commission's fundamental difficulty with this approach is its use of an approximation of each State's debt charges. It would prefer to use a more comprehensive method to determine this.

### ***Possible Modifications***

106. We believe that the approach outlined above has several shortcomings that could be remedied. They are as follows.

- (i) *The use of current non-financial assets.* These figures include revaluations, while the level of debt is based on historical values. This problem could be fixed by calculating asset figures based on accumulated capital expenditure figures similar to what is done in the current assessment.
- (ii) *The use of net debt.* We could use gross debt.
- (iii) *The absence of a capital grants assessment.* States support the netting of capital grants in the Debt Charges assessment. To do otherwise would mean that States were assisted to pay non-existent debt charges. Netting of grants could be achieved by deducting the accumulated value of capital grants from each State's standardised assets.
- (iv) *The absence of an interest rate assessment.* Some States face higher interest costs due to their small size. This is taken into account by the current assessment and this approach could be used in Option 6.

107. The modified option 6 would give States the capacity to fund their debt charges on the acquisition of non-replacement non-financial assets over the accumulation period. It assumes that States' need to borrow for non-replacement assets (total asset costs less depreciation accumulation) is determined by their need for non-replacement assets (fixed, land and other) less the capital grants they receive. The Australian ratio of debt to assets is then applied to the standardised non-financial assets purchased through borrowings. This therefore builds in standard other capital expenditure and receipts.

108. The working of Option 6 is presented in Table 2, and is compared to the current assessment.

***Conclusion — Option 6***

109. Compared with the current approach, this approach appears to achieve only a small increase in simplicity but at the cost of conceptual accuracy. The Commission does not necessarily see simplicity as a goal that should override the achievement of fiscal equalisation.

**Table 2** CURRENT DEBT CHARGES ASSESSMENT FRAMEWORK AND OPTION 6

Current Assessment	Assessment based on Option 6
Standard expenditure on non-replacement fixed assets, second-hand assets and land purchase <i>multiplied by</i>	A Standard expenditure on non-replacement fixed assets and second-hand assets B <i>minus (this incorporates the changes proposed for Option 5)</i>
Capital expenditure disability factor <i>Equals</i>	C <b>Standard depreciation</b> <i>multiplied by</i>
Per capita standardised expenditure on non-replacement fixed assets, second-hand assets and land purchase, which are accumulated  <i>Plus</i>	D <b>Non-replacement capital expenditure disability factor</b>  <i>Equals</i> F <b>Per capita standardised non-replacement capital expenditure, which are accumulated</b> <i>Plus</i>
Per capita accumulated standard other capital outlays <i>Minus</i>	G Standard accumulated land purchases and other capital outlays <sup>(a)</sup> <i>Equals</i>
Per capita accumulated standardised / standard depreciation <i>Minus</i>	H <b>Per capita standardised non-replacement capital expenditure, land and other capital outlays</b> <i>Minus</i>
Per capita accumulated actual capital grants received <i>Minus</i>	I Per capita accumulated actual capital grants received <i>Multiplied by</i>
Per capita accumulated standard other capital receipts <i>Minus</i>	K <b>Standard debt to asset ratio, to obtain standardised debt</b> <i>Multiplied by</i>
Per capita accumulated recurrent budget result (including depreciation) <i>Equals</i>	L <b>Standard interest rates, to obtain standardised debt charges</b> <i>Multiplied by</i>
Per capita standardised net borrowings <i>Multiplied by</i>	M <b>Interest rate disability</b> <i>Equals</i>
Interest rate disability <i>Equals</i>	N <b>Per capita standardised debt charges</b>
Per capita adjusted standardised net borrowings <i>divided by</i>	
Standard net borrowings <i>Equals</i>	
Category disability factor	

Note: (a) The amount for each State is the accumulation of Australian standard expenditure for each year of the accumulation period, divided by the State population of the relevant assessment year.

## CONCLUSION

110. This paper has sought to articulate an appropriate conceptual framework within which to evaluate options for the Debt Charges assessment, and to discuss each of the proposed options in relation to that framework. In simple terms, the framework says that the assessment should consider the annual expenses that impact directly on States' budgets, and recognise relevant disabilities. The Commission is conscious of the complexity of the current approach and is endeavouring to limit this. However, conceptual soundness appears to necessitate a relatively complex assessment for debt charges. It is also noted that the alternative approaches did not necessarily bring less complexity to the task.

111. It is clear that no option commands the support of all States. Six options were identified by the Working Party. The Commission would prefer to proceed with an approach which all States are prepared to accept, and is hopeful that consensus can be achieved at the October Conference. At this stage, the Commission believes Option 5 should be pursued for the Review. In the Commission's view, Option 5 best fulfils the objective of the assessment — to equalise the capacity of the States to meet debt charges on borrowings and best implement the requirement for the assessments set out in paragraph 17.

112. The assessment of holding costs includes elements of the balance sheet, which do not have a direct impact on the operating cost of providing services. Similarly, the direct assessment of capital moves away from the operating statement, as capital transactions are cash flow items and do not relate to the cost of service provision in the year the capital transaction is recorded. An equal per capita assessment would not address disabilities. The closest alternative to Option 5 would be Option 6 but this would provide only an approximation of costs and disabilities.

113. The Commission believes that Option 5 is likely to reflect most closely the actual costs faced by States in the delivery of services in the application year, and would be the most consistent with the assessment approach adopted for other categories. However, significant concerns remain about its complexity.

114. The Commission invites the States to respond to the proposals and arguments developed in this paper.

## ATTACHMENT A

### PROPOSED CHANGES TO THE CURRENT ASSESSMENT OPTION 5

1. This attachment outlines some modifications to the current Debt Charges assessment that would make it more conceptually accurate. These relate to:

- (i) the calculation of a quantity of borrowing factor;
- (ii) the treatment of land purchases;
- (iii) the treatment of pre 1993-94 depreciation; and
- (iv) the treatment of capital receipts.

#### *Calculation of a Quantity of Borrowing Factor*

2. This factor attempts to capture the drivers of non-replacement capital expenditure (total less depreciation). In the 1999 Review, a combination of depreciation factors and standardised expenditure (recurrent) factors was applied to capital expenditure. The proposed assessment retains the depreciation factors but adds a factor to account for population growth and inflation.

3. The assessment recognises that the drivers of non-replacement capital expenditure are:

- (i) population growth and inflation;
- (ii) construction costs; and
- (iii) the demand for the different types of government services due to changes in the socio-demographic composition of the population.

4. The Commission believes that the last two can be proxied by the Depreciation category factor. It considers that depreciation factors are applicable to capital expenditure generally because capital expenditure results in assets which are in turn depreciated. While the unit cost factors included in the depreciation assessment will apply to non-replacement capital expenditure, it is really the change in the socio-demographic characteristics of the population that are relevant, rather than the actual characteristics. The unadjusted depreciation factors have been used as a place holder, but more thought will be given to how these factors might be better tailored.

5. A single factor has been developed to capture the effects of population growth and inflation. It measures the needs for capital expenditure associated with population growth and inflation over the accumulation period. The factor is calculated as follows.

- (i) States are allocated their population shares of capital expenditure for each year of the accumulation period based on each year's population shares.
- (ii) Each State's capital expenditure is then summed over the accumulation period to obtain total capital expenditure for each assessment year.
- (iii) Each State's accumulated total capital expenditure is then divided by its population share at the start of the accumulation period.
- (iv) Each State's per capita accumulated total capital expenditure is then divide by the standard expenditure for Australia to obtain factors.

6. Table A-1 shows the population growth and inflation factors. The data used for the calculation of the factors relate to information available at the time of the 2002 Update.

**Table A-1** POPULATION GROWTH AND INFLATION FACTORS

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1995-96	0.94681	0.93809	1.13629	1.24087	0.91554	0.86683	1.94260	1.84815	1.00000
1996-97	0.94929	0.93590	1.14452	1.22977	0.91030	0.86945	1.84463	1.77145	1.00000
1997-98	0.95073	0.93504	1.15259	1.21056	0.91238	0.87061	1.74834	1.66893	1.00000
1998-99	0.95206	0.93564	1.16113	1.18825	0.91344	0.87095	1.65200	1.57491	1.00000
1999-2000	0.95218	0.93570	1.17160	1.17038	0.91459	0.87542	1.56236	1.50138	1.00000
2000-01	0.95294	0.93619	1.18138	1.15392	0.91406	0.88104	1.47193	1.41432	1.00000

7. The Depreciation category factors and the population growth and inflation factors are multiplied to obtain the non-replacement capital expenditure factor. Table A-2 shows these factors.

**Table A-2** NON-REPLACEMENT CAPITAL EXPENDITURE FACTORS

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1995-96	1.02555	0.92724	1.03560	1.17206	0.87918	0.76012	1.74831	2.64103	1.00000
1996-97	1.02837	0.92502	1.04329	1.16134	0.87372	0.76228	1.65902	2.53393	1.00000
1997-98	1.03010	0.92437	1.05063	1.14254	0.87540	0.76358	1.57206	2.38420	1.00000
1998-99	1.03131	0.92502	1.05901	1.12090	0.87648	0.76454	1.48520	2.25629	1.00000
1999-2000	1.03139	0.92540	1.06867	1.10361	0.87758	0.76884	1.40415	2.15132	1.00000
2000-01	1.03203	0.92578	1.07797	1.08804	0.87764	0.77399	1.32303	2.03129	1.00000

### *Treatment of Land Purchase*

8. In the 1999 Review, the same disabilities were applied to expenditure on non-replacement fixed assets and land purchase, while other capital outlays were assessed on an EPC basis. The Commission believes that different disabilities should be applied to land purchases. For example, depreciation disabilities are not relevant to the cost of land. Ideally, specific disabilities should probably apply to the need for land purchase but, for simplicity, it is proposed to assess land purchase on an EPC basis similar to other capital outlays. In any case, they represent less than four per cent of States' capital expenditures.

### *Treatment of Pre 1993-94 Depreciation*

9. In the 1999 Review, depreciation expenses were subtracted from total standardised capital expenditures. The depreciation expenses subtracted were standardised depreciation expenses from 1993-94 onward (the first year for which depreciation needs were assessed) and standard depreciation expenses for the prior years.

10. States criticised this approach as resulting in the double equalisation of depreciation needs prior to 1993-94.

11. The Commission proposes to solve the problem by subtracting standard depreciation from the total capital expenditure standard before disabilities are applied.

### *Treatment of Capital Receipts.*

12. During the 1999 Review, the Commission decided that capital receipts should be assessed EPC because they were relatively small compared to other items in the assessment framework.

13. *New South Wales.* New South Wales considered that the treatment of capital receipts should recognise that the ability to raise revenue from these assets depends on the market into which they are sold. For example, it argued that land and buildings are sold in a local market with local pricing structures, while sales of second-hand plant and

equipment will be subject to nationally uniform pricing structures. Therefore, the assessment of sales of the latter should be EPC. However, New South Wales would also support the netting off of capital receipts if it was considered too complex to distinguish between different types of assets.

14. **Western Australia.** Western Australia believed that the revenue from asset sales should be subtracted from capital expenditures, as asset sales are a reduction in capital stock.

15. **South Australia.** South Australia argued that revenues from land sales and second-hand asset sales should be offset against capital expenditures before capital disabilities are applied. In essence, a net assessment should be undertaken. It argued that higher capital expenditures result in higher capital revenues when assets are sold in the same market.

16. South Australia argued that the above case should apply to land, buildings, second-hand assets and PTE receipts. However, it suggested that the Commission look at the nature of any other receipts to determine if a local market is involved.

17. **Tasmania.** Tasmania opposed netting receipts from capital sales off against capital expenditure because it believed that there are varying capacities between the States to recover funds from the proceeds of the sale of assets. It argued that disabilities should be assessed to reflect the different revenue-raising capacities. The disabilities should allow for the differences between States in the markets in which the assets are sold, (especially buildings). This is also the case for plant and equipment because if they must be transported to another market to maximise returns, this will result in a lower price.

18. Tasmania suggested that a market indicator based on the level of capital investment could be used to measure disabilities relating to the sale of assets. Alternatively, gross State product per capita could be used, as this indicator would provide a good measure of a market in which a State must sell both buildings and plant and equipment.

19. Furthermore, Tasmania did not support any additional adjustment to asset sales due to environmental factors, as the Depreciation assessment already takes account of these issues.

20. **Comment.** Some States proposed netting these revenues off against capital expenditure and land purchase. Others proposed the assessment of specific disabilities.

21. The current EPC assessment is probably not ideal. The netting off of capital receipts is more likely to detract from fiscal equalisation. The disabilities faced by States for expenditure are likely to differ from the revenue related disabilities. On the revenue side, the strength and size of State markets would have an influence on the price received from asset sales. On the expenditure side, construction costs and population increase would be the major disabilities.

22. It is proposed that, similar to the 1999 Review, capital receipts be assessed EPC — for simplicity and because these receipts are relatively small.

23. Table A-3 shows the assessment derived from the proposed modified debt charges assessment. The data are the same as those used in the 2002 Update, although the proposed inclusion of capital expenditure on financial assets has not yet been included.

**Table A-3** PROPOSED MODIFIED DEBT CHARGES ASSESSMENT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1995-96	1.02161	0.94311	1.01415	1.12665	0.90627	0.78217	0.70000	2.07624	1.00000
1996-97	1.02122	0.93648	1.00796	1.13830	0.89132	0.74516	0.86000	2.15782	1.00000
1997-98	1.02164	0.93970	0.99699	1.15176	0.87199	0.70942	1.04000	2.05924	1.00000
1998-99	1.01845	0.93872	0.99249	1.15932	0.85505	0.67830	1.20000	2.11269	1.00000
1999-2000	1.01619	0.93851	0.98262	1.17182	0.84217	0.64634	1.36000	2.14468	1.00000
2000-01	1.01496	0.94495	0.96439	1.17782	0.84006	0.61106	1.52000	2.12666	1.00000

## **ATTACHMENT B**

### **OPTION 6 – SIMPLIFIED DEBT CHARGES ASSESSMENT**

1. Under this approach, standardised non-replacement capital expenditure would be calculated the same way as the modified current approach. Also, as in the current approach, the standardised expenditure would be accumulated to represent the historical value of the States' non-financial assets for which they would have borrowed.
2. Table B-1 illustrates the workings of this approach.

**Table B-1** DERIVATION OF DEBT CHARGES FACTORS UNDER OPTION 6

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
(1) Standardised Non-Financial Assets (\$m)	43 134.030	526.420	640.612	202.5	9 763.4	2 923.0	2 737.2	2 159.6	124 086.6
(2) Capital Grants (CG)	20078.2	14376.6	10173.0	5556.5	4964.5	1684.9	902.7	1042.1	58778.6
(3) Standardised Non-Financial Assets acquired from borrowings (\$m)									
(1)-(2)	23 055.716	149.810	467.5	6 646.0	4 798.9	1 238.0	1 834.4	1 117.5	65 308.0
(4) Actual Gross Debt <sup>(a)</sup> (\$m)	17 167.0	6 713.0	3 627.0	2 906.0	6 715.0	1 953.0	1 005.0	1 639.0	41 725.0
(5) Standard Debt to Assets Ratio - (4) / (3)	0.74	0.42	0.35	0.44	1.40	1.58	0.55	1.47	0.64
(6) Standardised Gross Debt (\$m) - (5) Aust * (3) State	14 730.210	318.0	6 687.7	4 246.1	3 066.0	791.0	1 172.0	714.0	41 725.0
(7) Actual Gross Interest Repayment - \$m - Debt Charges actual std budget – 1999-2000 <sup>(b)</sup>	1 321.3	458.9	300.0	260.4	618.4	159.8	39.5	150.9	3 309.2
Gross Interest Rate - (7) / (6) - %	7.7	6.8	8.3	9.0	9.2	8.2	3.9	9.2	7.9
Interest Rate Factor - 1999 Review	1.00000	1.00000	1.00000	1.00500	1.01500	1.03000	1.03000	1.03000	1.00000
Standardised Gross Interest Rate	7.9	7.9	7.9	8.0	8.1	8.2	8.2	8.2	7.9
Standardised Gross Interest Repayment	1 168.3	818.3	530.4	338.4	246.8	64.6	95.7	58.3	3 309.2
Standard Gross Interest Repayment	1 117.2	823.2	614.4	325.2	259.8	81.8	53.9	33.7	3 309.2
Debt Charges – Category factor	1.04205	0.99053	0.86019	1.03715	0.94657	0.78738	1.77054	1.72357	1.00354
Debt Charges – Category factor Rescaled	1.03838	0.98704	0.85716	1.03350	0.94324	0.78461	1.76430	1.71749	1.00000
ACT Adjustment							0.73		
Category factory with ACT adjustment	1.05930	1.00692	0.87442	1.05432	0.96224	0.80042	1.30000	1.75210	1.00841
Category factory with ACT adjustment - Rescaled	1.05046	0.99852	0.86713	1.04552	0.95421	0.79374	1.28915	1.73748	1.00000

Sources: (a): ABS, GFS, 5512.0, 1999-2000, Table 25.

(b): CGC Budget Analysis data, 1999-2000.