

# THE ROLE THAT DEPRECIATION COULD PLAY IN LOCAL GOVERNMENT FINANCE

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## FOREWORD

This discussion paper has been developed by CIPFA as a contribution to the debate on modernising public services.

Specifically, it deals with the role that depreciation could play in local government finance.

It is intended that the report will be:

- considered by the Prudential Code Steering Group
- input into CIPFA's review of local authority capital accounting
- submitted to the national and devolved working groups on local government capital finance
- submitted to the HM Treasury whole of government accounts process
- submitted to the Audit Commission and Audit Scotland
- made publicly available to stakeholders and others.

This report has been prepared by Maureen Wellen, CIPFA Policy and Technical Manager with responsibility for capital and treasury matters, and Stephen Sheen, Ichabod's Industries Ltd, acting as a consultant to CIPFA in this regard.

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## 1 EXECUTIVE SUMMARY

- 1.1 Depreciation is defined in accounting as the measure of the cost or revalued amount of the economic benefits of a long life asset that have been consumed during the period.

### **In the private sector**

- 1.2 Depreciation is an accepted mechanism for private sector companies. This means that in the private sector a company should make the following assessment when determining whether to acquire fixed assets:
- (a) the company will not be constrained by the need to resource the asset immediately, since it will not be required so to do
  - (b) an investment appraisal will be carried out to confirm that the assets will make an acceptable contribution to the company's profits within the desired timescale
  - (c) if the appraisal is favourable, the company will plan its capital expenditure based on assessments of the future affordability of depreciation charges that will be charged to profit and loss accounts over the assets' useful lives
  - (d) the company must also look at the cash flow implications of the capital expenditure to ensure that it will have cash available to meet all cash outgoings – where there is a shortfall, then borrowing will be required and the company will have to assess the affordability of the consequent interest payable from profits
  - (e) if borrowing is necessary at any time, the company will assess whether its overall level of debt is acceptable.
- 1.3 Depreciation guides investment decisions over the whole life of a fixed asset by requiring an assessment of the ability to generate income to cover the rate at which the economic benefits inherent in the asset will be consumed.
- 1.4 Generally accepted accounting practice requires that resources are retained within the business through the charge for depreciation made to the profit and loss account to cover the cost of using up the economic benefits of assets. However, it does not require that the particular resources so retained are either applied or set aside to the particular asset(s) concerned, to capital expenditure generally, or to the repayment of debt. Managerially, the

company is required to manage its resources in aggregate, and will very quickly get into trouble if it does not meet its on-going commitments.

### **Historical cost and current value bases for depreciation**

- 1.5 There are two primary bases for measuring the economic benefits consumed by an organisation in its use of assets : the historical cost basis and the current value basis.
- 1.6 Under the historical cost basis, assets are initially recorded in the balance sheet at their historical cost, and at historical cost less depreciation thereafter. Depreciation then spreads the cost of the asset over its useful life. This is a relatively simple process. Also, for fairly short life assets, the values recorded in the balance sheet throughout their lives are probably not materially different from their intrinsic economic value. However, for very long life assets such as buildings, if they are recorded in the balance sheet at historical cost less depreciation, over time the values shown in the balance sheet will diverge from their value to the business, because of increases in property values.
- 1.7 Many private sector companies do use the historical cost basis for depreciation. However, they are able, under generally accepted accounting practice, to adopt a policy of regularly revaluing assets at their current value, ie their worth to the business at today's prices. Depreciation is then calculated using the current value of assets. In this case, depreciation represents the real cost of the economic benefits consumed during the year. As the real cost at today's prices is almost always greater than the historical cost, the cumulative effect of the depreciation charges on the current value basis will be to generate more cash than would be needed to cover the original outgoing. It also relates directly to long term sustainability, because the cost of any replacement asset at the end of the original asset's life will also have risen.
- 1.8 In the private sector, companies can choose whether to use the historical cost or the current value basis, so long as they apply their choice consistently. In the public services, most assets are now required to be valued at current value.

### **Applying a depreciation model within local government**

- 1.9 The assessments outlined in paragraph 1.2 above have close congruencies with the fiscal rules for government spending especially in ensuring that the costs and benefits of public expenditure are shared fairly between generations:

- (a) the golden rule: over the economic cycle the Government will only borrow to invest and not to fund current expenditure; and
- (b) the sustainable investment rule: public debt as a proportion of national income will be held over the economic cycle at a stable and prudent level.

1.10 This report argues that, bringing the fiscal rules and generally accepted accounting practice together, local authorities could in future work to the following framework:

- (a) authorities would not be required to justify their capital expenditure plans in terms of the resources available in the year investment is to take place, but would be able to consider the financial consequences over the life of the assets to be acquired
- (b) investment appraisals would be performed to confirm value for money, with all options being able to be judged equally on their whole life implications, in contrast to the current system that focuses exclusively on the implications at the point of investment
- (c) if the appraisal is favourable, the authority would schedule its capital expenditure based on assessments of the future affordability of depreciation charges that would be charged to revenue accounts over the assets' useful lives
- (d) central government/devolved administration influence on local authority capital investment could be exercised through revenue support for such investment and through any central limits on revenue expenditure or on borrowing
- (e) the authority would consider the cash flow implications of the capital expenditure to determine whether at any time it would need to borrow to cover the cash outgoings necessitated by the investment. Where there is a shortfall, then borrowing will be required and can be taken out in accordance with proper practices for treasury management. The authority would have to assess the affordability of the consequent interest payable from revenue accounts
- (f) where borrowing would be necessary, the authority would assess the prudence of its overall debt burden, including in the event of an unfavourable change in economic circumstances.

- 1.11 The benefits of depreciation accounting can only fully be realised in this framework if generally accepted accounting practice is implemented without constraint. For example, allowing depreciation to be an absolute charge that impacts on financing allows the impact of capital investment to be judged equally against alternative spending options. If a company has a building that requires increasing amounts of repairs and maintenance to keep it standing, a proper judgement can be made of maintaining the property against the alternative costs of demolishing and rebuilding. The company would not have to make separate judgements about what it could afford from its discrete revenue and capital budgets but about the affordability of the resources consumed in any year as expenses in the profit and loss account.
- 1.12 It is, however, recognised that there are other pressures that have led the government to indicate that it wishes to maintain the current revenue/capital resources divide for local government. Indeed, local government might also prefer to retain this split, at least in the medium term. Policy reasons for retaining this would include:
- (a) local government expenditure impacts on both local and central taxation and the government may wish to continue to have a direct impact separately on the effects of revenue pressures and of capital pressures on taxation
  - (b) a concern that capital investment continues in the face of pressures for increased support for day-to-day expenses
  - (c) a concern that over the medium term, not borrowing is only for a capital purpose.
- 1.13 Therefore, two general options for keeping a revenue/capital divide whilst moving further towards generally accepted accounting practice in the short term are considered in this report:
- (a) a reserve option – controlling the resources that authorities generate from depreciation charges
  - (b) a cash balance option – controlling the cash that authorities generate from depreciation charges.

Details for both these options are given in the report.



## **Issues of affordability and the possibility of a phased introduction**

- 1.14 The introduction of a depreciation model within local government would have a very significant impact in terms of the need to generate resources. Currently, depreciation is charged within the service accounts of local authorities, but this is in effect reversed out of the accounts prior to establishing the annual financing requirements for the authority, and replaced with the statutorily determined minimum revenue provision (England and Wales)/loans fund repayment (Scotland). There is one exception to this currently : for the HRA in England, depreciation equal to the major repairs allowance for the authority (calculated as part of housing subsidy) is charged to 'the bottom line'.
- 1.15 Therefore full depreciation accounting would have huge 'bottom line' impact. This would need to be taken into account by national government and devolved administrations during spending reviews, and by local government during budget setting.
- 1.16 If it is desired to gradually phase in the requirement for local authorities to charge depreciation to the bottom line, then this would be possible technically. The easiest way of phasing in the depreciation charge would be through the reserves option described in chapter 7, by means of additional journal entries between the appropriations section of the consolidated revenue account and reserves, in order to limit the impact on the bottom line of the local authority.
- 1.17 However, it must be recognised that, because of statute with respect to capital finance, local authorities are currently not retaining sufficient income to cover the real costs of the using up of capital assets. Any phased introduction would perpetuate this situation, albeit to lesser extent than is currently the case.

## **Links with the prudential code, government fiscal strategy and the whole of government accounts process**

- 1.18 There are a number of other factors that, together, support the further consideration of applying full depreciation accounting to local government accounts.
- 1.19 A new prudential framework for local authority capital investment has been announced for England, Wales and Scotland. Under the prudential framework, local authorities will be responsible for deciding how much they

can afford to borrow, drawing on a prudential code that is being developed by CIPFA. The prudential code will require local authorities to consider the short and medium term affordability, and the long term sustainability of their capital investment. The prudential code is being designed to be operable within a number of different support mechanisms. However, full depreciation accounting, which requires the charging and resourcing of depreciation, would have a particularly good fit with the prudential code and prudential framework. This is because full depreciation accounting is specifically designed to charge to the revenue account the economic benefits that are consumed by the using up of fixed assets.

- 1.20 Depreciation accounting also has a synchronisation with the government's fiscal strategy. In particular, depreciation has an explicit role to play in the operation of the golden rule, because the government defines the current budget as the difference between current receipts and current expenditure including depreciation.
- 1.21 Finally, full depreciation accounting will be an important element if local authority accounts are to be included within whole of government accounts. The government is committed to the production of whole of government accounts as a step in ensuring that best practice accounting methods are used to construct the public accounts and that fiscal reporting is as transparent as possible, as required by the Government's Code for Fiscal Stability. In particular, it is intended that whole of government accounts will provide audited data to underpin the operation of the golden rule, and will allow the public sector balance sheet to be used in fiscal management.

## 2 INTRODUCTION

- 2.1 Investment in fixed assets is a long term consideration. Decisions made in the present will affect the quality of public services, not just for today's citizens, but for future generations.
- 2.2 It is generally accepted that, throughout Great Britain, the state of many public service assets has deteriorated to a significant extent. It is vital that practices are put into place that both ensure the long term sustainability of long life public assets in use, and encourage the consideration of future developments on their outcomes rather than their means of financing.
- 2.3 One important and explicitly intended result of a number of recent developments, including the government's fiscal strategy and introduction of resource accounting, is the facilitation of a better approach to public service long life assets.
- 2.4 It is the thrust of this discussion paper that depreciation accounting can play a significant role in achieving this within the local government sector.

### 3 THE ROLE AND APPLICATION OF DEPRECIATION IN UK GAAP IN THE PRIVATE SECTOR

#### 3.1 Depreciation is defined in UK generally accepted accounting practice (UK GAAP) as:

“The measure of the cost or revalued amount of the economic benefits of the tangible fixed asset that have been consumed during the period.

Consumption includes the wearing out, using up or other reduction in the useful economic life of a tangible fixed asset whether arising from use, effluxion of time or obsolescence through either changes in technology or demand for the goods and services produced by the asset.”<sup>1</sup>

And tangible fixed assets as:

“Assets that have physical substance and are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes on a continuing basis in the reporting entity’s activities.”<sup>1</sup>

#### 3.2 A fundamental key to understanding the role of depreciation is the distinction between cash and resources in accounting terms. Both are important.

#### 3.3 Analogies with personal finance may be helpful as an aide to the understanding of this fundamental difference:

- (a) if you purchase food with cash and eat it, that is current expenditure – consumed within the current period in accounting terms
- (b) if you purchase a car with cash, then you have replaced cash with the usefulness of a car which you will most probably expect to last for more than a year – capital expenditure in accounting terms
- (c) if you borrow money you increase the cash available to you to use, but you have not increased your wealth by the mere fact of borrowing cash, since you will have to pay the loan back to the lender. You will probably intend to generate more resources for yourself by the use of cash than the amount of the original cash borrowed plus the interest

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<sup>1</sup> Financial Reporting Standard FRS 15, *Tangible Fixed Assets*, Accounting Standards Board, February 1999 ISBN 1 85 712 079 5

you will have to pay. But that is another story, for which other accounting entries would be needed.

- 3.4 In UK GAAP, both cash movements and movements in resources are important. Accounting for cash movements alone will not measure the underlying financial performance of an organisation. In order to do that, it is necessary also to focus on when resources (in whatever form) are consumed. The concept of depreciation is vital to this. Depreciation is the method by which the consumption of the resources that are inherent in fixed assets is calculated and accounted for.
- 3.5 When a company acquires fixed assets, it requires cash in order to make payments to the seller or contractor. This cash can come from the company's own bank balances or be borrowed from a lender. In either of these events, accounting entries will be made for the company's balance sheet and cash flow statement, but not for the profit and loss account. This is because no resources have been consumed by the transaction that would require an expense to be charged to the profit and loss account.
- 3.6 This is a fundamental point that it is necessary to understand in order to understand the role of depreciation within UK GAAP.
- 3.7 It is not necessary to understand double entry bookkeeping in order to understand the basic concept. This paper does, however, for completeness include below an example of the accounting entries that are used. The notes below each pair of entries explains what is happening.

**A company acquires a vehicle for £10,000**

Debit	Fixed assets	£10,000	<i>increase in fixed assets</i>
Credit	Cash	£10,000	<i>reduction in cash</i>

The usefulness of the future economic benefits inherent in the vehicle are recognised, and cash is reduced by the amount paid.

NB If the payment had been made for running expenses, such as petrol, then the debit would have been to the profit and loss account.

Debit	Cash	£10,000	<i>increase in cash</i>
Credit	Loans	£10,000	<i>increase in loans outstanding</i>

If the company has no spare cash, it will need to borrow to meet the payment. Cash is increased by the advance, but is not treated as income in the profit and loss account since the loan will need to be repaid at some future date. Instead, the debt is recognised on the balance sheet for the amount borrowed.

- 3.8 Companies are not required to finance their acquisitions of fixed assets by earmarking or setting aside resources at the point of acquisition.

- 3.9 In relation to the profit and loss account, good financial management would suggest that the company needs instead to be comfortable that:
- (a) if the company needs to borrow cash to meet the payment for the new acquisition, that it will be able to afford the interest charged on the loan, which will be charged to the profit and loss account
  - (b) as the company consumes the economic benefits of the asset, it will be able to generate income to cover this consumption of resources, which will be charged to the profit and loss account.
- 3.10 The second charge to the profit and loss account referred to above, the consumption of the economic benefits of the asset, will be charged to the profit and loss account through depreciation. And in certain circumstances through an impairment charge. In this context impairment, in simple terms, may be regarded as a ‘catching up’ process for depreciation, where an event has occurred that means that the economic benefits of the asset have fallen below the amount to which it has currently been depreciated.
- 3.11 A simple and common way of charging depreciation is to allocate the value that an asset is being carried at in the balance sheet over its remaining useful life by dividing the value of the asset by its remaining life measured in years. This is known as the ‘straight line’ method of depreciation. Other methods are available. The method chosen should reflect the actual consumption of the asset.
- 3.12 In the example of the vehicle used in paragraph 3.7 above, if it is estimated that the vehicle has a useful life of five years with no residual value the annual charge for depreciation can be calculated as £10,000 divided by five, ie £2,000.

**Charge depreciation on vehicle to the profit and loss account**

Debit	Profit and loss account	£2,000	<i>reduction in revenue resources</i>
Credit	Fixed Assets	£2,000	<i>reduction in fixed assets</i>

Fixed assets are reduced by the amount they have depreciated. The amount is then charged to the profit and loss account as an expense for the resources consumed by the company in that particular year. This accounting transaction would, in the normal course of events, be made for each year of the vehicle’s five year useful life.

- 3.13 The depreciation charges over the asset’s life are not fixed irrevocably at the point of acquisition. For example, if the vehicle was driven recklessly and as a result it was decided to decrease its useful life from five years to four years,

the annual depreciation charge would rise in order to reflect the accelerated consumption of economic benefits. Conversely, if the vehicle was carefully repaired and maintained and as a result it was decided to increase its useful life from five years to six years, the annual depreciation charge would fall as a result of the preservation of the economic benefits of the asset.

- 3.14 As a result of the accounting practices with respect to depreciation, depreciation can play very practical roles:
- (a) it guides investment decisions over the whole life of a fixed asset by requiring an assessment of the ability to generate income to cover the rate at which the economic benefits inherent in the asset will be consumed
  - (b) it provides a continuing incentive to look after fixed assets, with effective repairs and maintenance keeping the annual charges to the profit and loss account down; neglect of assets has the effect of increasing the depreciation charges
  - (c) it ensures that the value of fixed assets are charged to the profit and loss account as they are consumed. NB for long lived assets in a public sector context, this would satisfy the demands for inter-generational equity.
- 3.15 Thus, UK GAAP requires that resources are retained within the business through the charge made to the profit and loss account to cover the cost of using up the economic benefits of fixed assets.
- 3.16 However, UK GAAP does not require that the resources so retained through the charging of depreciation are either applied or set aside to the particular asset(s) concerned, to capital expenditure generally, or to the repayment of debt.
- 3.17 When the time comes to repay debt (ie the actual loan outstanding, not the interest which is a charge to the profit and loss account as it becomes due), cash is repaid to the lender. As was the case when the loan was originally incurred, accounting entries will be made for the company's balance sheet and cash flow statement but not in the profit and loss account.

### **Repayment of loan**

Debit	Loans	£10,000	<i>decrease in loans outstanding</i>
Credit	Cash	£10,000	<i>decrease in cash</i>

Cash is decreased by the repayment, but is not treated as expenditure in the profit and loss account. This is simply the converse of the entry identified when the loan was originally taken out (see paragraph 3.7 above).

- 3.18 Furthermore, the cash required to repay the loan can either come from the company's own bank balances, or by taking out a replacement loan.
- 3.19 Managerially, the company needs to look not only to its profit and loss account but also to its balance sheet in order to ensure its long term sustainability as a 'going concern'.
- 3.20 In the private sector, the market has ways of dealing with these issues. A company can be operating profitably but still, because of cash flow difficulties, go out of business. To suggest otherwise would be disingenuous. Market analysts are interested not only in the profitability of a company, but also whether it will be able to meet its commitments as they fall due.
- 3.21 Under UK GAAP, the primary purpose of charging depreciation is not to build up resources for the repayment of debt or the replacement of depreciating assets, although this might be its outcome. The fundamental objective is to reflect the cost of use of fixed assets in each financial year, measured by the amount of economic benefits consumed by the organisation.
- 3.22 There are two main bases for measuring the cost:
- (a) historical cost : if assets are recorded in the balance sheet at their historical cost (ie a measure of what they originally cost the organisation), then depreciation measures the using up of economic benefits by spreading the actual cost of the assets over their useful life.
  - (b) current value : if assets are recorded in the balance sheet at current value (ie a measure of what they are currently worth to the organisation<sup>2</sup>), then depreciation measures the consumption of

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<sup>2</sup> Current value is defined in FRS 15 as "The current value of a tangible fixed asset to the business is the lower of replacement cost and recoverable amount" where recoverable amount is "The higher of net realisable value and value in use".



economic benefits by, in essence, charging how much they are worth to the organisation in the year in which they are consumed. This will usually result in cumulative charges greater than the original cost of the assets.

- 3.23 In the private sector, under FRS 15, companies can choose whether to value their tangible fixed assets at either historical cost or current value. Where an entity chooses to revalue tangible fixed assets, the valuation must be performed on a consistent basis, kept up to date, and gains and losses on revaluation recognised on a consistent basis. Moreover, where a policy of revaluation is adopted then it should be applied to individual classes of tangible fixed assets, but need not be applied to all classes of tangible fixed assets held by the entity.
- 3.24 The next two sections of this report examine further the different aspects of the historical cost and current value bases for depreciation in the private sector.

## 4 HISTORICAL COST BASIS FOR DEPRECIATION IN THE PRIVATE SECTOR

4.1 The principles of depreciation using an historical cost basis are relatively easy to understand. As described in section 3, where assets are recorded in the balance sheet at historical cost, then depreciation spreads the cost of the assets over their useful life.

4.2 Using the example of the vehicle quoted in section 3:

- (a) The company purchases a vehicle for £10,000. Cash is decreased by £10,000. Fixed assets are increased by £10,000. The company estimates that the vehicle will have a useful life of five years. No charge is made to the profit and loss account at this stage.
- (b) At the end of year 1, depreciation of £2,000 is charged to profit and loss account. Fixed assets are reduced by £2,000 from £10,000 to £8,000. There is no charge to cash.
- (c) At the end of year 2, depreciation of £2,000 is charged to the profit and loss account. Fixed assets are reduced by £2,000 from £8,000 to £6,000. There is no charge to cash.
- (d) And so on, until after 5 years, the final £2,000 depreciation is charged to the profit and loss account and fixed assets are reduced to £0. The asset is all used up and thrown away.
- (e) If the company had cash available in its bank account to pay for the vehicle at the start of the five year period then, all other things being equal, the company will have the same amount of cash at the end of the five years as it did at the start.
- (f) If the company borrowed cash to pay for the vehicle at the start of the five year period then, all other things being equal, it will have the cash at the end of the five years to repay the loan.
- (g) Thus, provided always that the company has generated sufficient income to cover the expenses charged to its profit and loss account, it will be in the same position at the end of the five year period as it was at the beginning – except, of course, that if it now wishes to purchase a replacement vehicle it is likely to cost it more now than it did five years ago.

- 4.3 There is no requirement for the company to set aside the resources generated by the charging of depreciation to finance the specific asset, and in fact little likelihood that the company will in practice do so. However, the charging of depreciation ensures that sufficient resources are retained within the business, rather than being available as distributable profit, to enable the vehicle to be financed. It also ensures that the charges to the profit and loss account are made as the asset is used up rather than when it is originally purchased.
- 4.4 This all makes intuitive sense. Furthermore, for the example used, that of a vehicle, the value at which the asset is carried in the balance sheet (its historical cost less depreciation charged) is probably not materially different from its intrinsic economic value.
- 4.5 The situation is rather different for other types of asset.
- 4.6 Take, for example, a company that owns freehold a number of retail premises that were constructed some 20 years ago. The cost of the land was £5 million and the cost of the buildings £8 million. The original value on the balance sheet was therefore £13 million. It is estimated that the current value of the land is £18 million and the current value of the buildings £16 million. Thus the current value of the asset is £34 million. Yet, the carrying value of the asset in the company's balance sheet, ie its historical cost less depreciation, is £9 million.<sup>3</sup>
- 4.7 This example illustrates some of the issues that are at the heart of the accounting debate on the pros and cons as between historical cost accounting and current value accounting. Historical cost accounting is simpler, less volatile, and good at allocating actual costs over time. However, it parts company with economic reality in respect of significant assets.

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<sup>3</sup> This figure is calculated by assuming that the land element is not being depreciated, the useful life of the buildings are 40 years, and that straight line depreciation is being used for the buildings.

## 5 CURRENT VALUE BASIS FOR DEPRECIATION IN THE PRIVATE SECTOR

- 5.1 “Where an asset has been revalued the current period’s depreciation charge is based on the revalued amount and the remaining useful economic life.”<sup>4</sup>
- 5.2 Many companies use an historical cost basis for depreciation (ie, based on the price actually paid for the assets). However, they are able under UK GAAP to adopt a policy of regularly revaluing assets at their current value, ie their worth to the business at today’s prices. Depreciation is then calculated using the current value of assets. In this case case, depreciation represents the real cost of the economic benefits consumed in any financial year. As the real cost at today’s prices is almost always greater than historical cost, the cumulative effect of the depreciation charges will be to generate more cash than needed to cover the original outgoing. The exemplifications in the following paragraphs show how and to what extent the surplus cash might be generated.
- 5.3 It is important to note that under UK GAAP, current value depreciation does not generate reserves for financing new capital investment, in the sense of the accounting entries resulting in discrete balances of resources identifiable in the balance sheet. The figure charged as depreciation each year to the profit and loss account will be the equivalent of the amount needed to replace the economic benefits consumed in that year. But the charge does not need to be used for that purpose. When a replacement asset is eventually acquired, it will be required to be put on the balance sheet and depreciated to the profit and loss account over its useful life. Resources are not required to be set aside for this at source.
- 5.4 Charging current value depreciation on existing fixed assets can result in surplus cash balances that will help to reduce the need for a company to borrow to meet the payments made in acquiring a replacement or alternative asset. However, it is important to stress that this will only happen if the charges made to the profit and loss account for the depreciation are matched by cash based income that is credited to the profit and loss account. This has an important read-over to the discussion later in this report on the contribution that depreciation accounting could make to the new financial framework for local authorities. A depreciation based accounting solution requires that depreciation has to be a real cost in revenue accounts and not simply a presentational entry that is reversed out with no effect.

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<sup>4</sup> FRS 15

- 5.5 In the private sector, a company should make the following assessment when determining whether to acquire fixed assets:
- (a) it will not be constrained by the need to resource the asset immediately, since it will not be required so to do
  - (b) an investment appraisal will be carried out to confirm that the assets will make an acceptable contribution to the company's profits within the desired timescale<sup>5</sup>
  - (c) if the appraisal is favourable, the company will plan its capital expenditure based on assessments of the future affordability of depreciation charges that will be charged to profit and loss accounts over the assets' useful lives
  - (d) the company must also look at the cash flow implications of the capital expenditure to ensure that it will have cash available to meet all cash outgoings – where there is a shortfall, then borrowing will be required and the company will have to assess the affordability of the consequent interest payable from profits
  - (e) if borrowing is necessary at any time, the company will assess whether its overall level of debt is acceptable, and in particular whether it might leave it exposed or over-committed in the event of changed economic circumstances.

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<sup>5</sup> NB It is not recommended that accounting conventions such as depreciation are used in the appraisal of different options. As is standard procedure, option appraisal should be based on cash flows. Rather, depreciation is pertinent to the issue of affordability – where one scheme may be better value for money over time than another, but not be affordable under traditional cash accounting and budgetary control because of high up front cash flows. A domestic analogy would be a mortgage.

## 6 APPLYING A DEPRECIATION MODEL WITHIN LOCAL GOVERNMENT — INTRODUCTION

6.1 The assessments outlined in paragraph 5.5 above have close congruencies with the fiscal rules for government spending especially as they would relate to ensuring that the costs and benefits of public expenditure are shared fairly between generations:

- (a) the golden rule: over the economic cycle the Government will only borrow to invest and not to fund current expenditure; and
- (b) the sustainable investment rule: public debt as a proportion of national income will be held over the economic cycle at a stable and prudent level.

6.2 Bringing the fiscal rules and the UK GAAP principles together, local authorities could work to the following framework:

- (a) authorities would not be required to justify their capital expenditure plans in terms of the resources available in the year investment is to take place, but would be able to consider the financial consequences over the life of the assets to be acquired
- (b) investment appraisals would be performed to confirm value for money, with all options being able to be judged equally on their whole life implications in contrast to the current system that focuses exclusively on the implications at the point of investment
- (c) if the appraisal is favourable, the authority would schedule its capital expenditure based on assessments of the future affordability of depreciation charges that would be charged to revenue accounts over the assets' useful lives
- (d) central government/devolved administration influence on local authority capital investment could be exercised through revenue support for such investment and through any central limits on revenue expenditure or on borrowing
- (e) the authority would consider the cash flow implications of the capital outlay to determine whether at any time it would need to borrow to cover the cash outgoings necessitated by the investment. Where there is a shortfall, then borrowing will be required and can be taken out in

accordance with proper practices for treasury management<sup>6</sup>. The authority would have to assess the affordability of the consequent interest payable from revenue accounts

- (f) where borrowing would be necessary, the authority would assess the prudence of its overall debt burden, including in the event of an unfavourable change in economic circumstances.

6.3 Such a framework would contribute to the modernisation of public services by:

- (a) enabling councils to use their investment resources subject only to any restrictions that might be imposed on borrowing and the ability to meet the resulting depreciation charges in future years
- (b) making available more consistent information about the implications of investment that is neutral to the method of financing
- (c) encouraging authorities to manage their assets to the best effect by matching costs to the periods that will benefit from the capital investment
- (d) providing greater freedom for the best authorities to the extent that effective asset management will lead to lower depreciation charges whilst poor asset management will result in accelerated depreciation.

6.4 The benefits of depreciation can only fully be realised in this framework if UK GAAP principles are implemented without constraint. For example, allowing depreciation to be an absolute charge that impacts on financing allows capital investment to be judged equally against alternative spending options. If a company has a building that requires increasing amounts of repairs and maintenance to keep it standing, a proper judgement can be made of maintaining the property against the alternative costs of demolishing and rebuilding (writing off the existing asset, future depreciation charges, any costs of borrowing, etc). The company would not have to make separate judgements about what it could afford from its discrete revenue and capital budgets but about the affordability of the resources consumed in any year as expenses in the profit and loss account.

6.5 It is, however, recognised that there are other pressures that have led the government to indicate that it wishes to maintain the current revenue/capital

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See the *Code of Practice for Treasury Management in the Public Services*, CIPFA, 2001 ISBN 0 85299 9437

resources divide for local government. Indeed, local government might also prefer to retain this split, at least in the medium term. Policy reasons for retaining this would include:

- (a) local government expenditure impacts on both local and central taxation and the government may wish to continue to have a direct impact separately on the effects of revenue pressures and of capital pressures on taxation
- (b) a concern that capital investment continues in the face of pressures for increased support for day-to-day expenses
- (c) a concern that over the medium term, net borrowing is only for capital purposes.

6.6 If it is decided to continue to treat capital and revenue resources separately, then it is important that this is done in a way that does not prejudice further possible future moves towards UK GAAP.

6.7 Therefore, two general options for keeping a revenue/capital divide whilst moving further towards UK GAAP in the short to medium term are considered in this report:

- (a) a reserve option – controlling the resources that authorities generate from depreciation charges
- (b) a cash balance option – controlling the cash that authorities generate from depreciation charges.

These options are described in the next two sections of this report.



## 7 APPLYING A DEPRECIATION MODEL WITHIN LOCAL GOVERNMENT — A RESERVES OPTION

- 7.1 The reserves option for a depreciation based accounting solution is concerned with maintaining the separation of capital and revenue resources.
- 7.2 This option would require special accounting arrangements that, since they have no counterpart in UK GAAP, would need to be established through statute.
- 7.3 In essence, this option would necessitate the establishment of a new reserve within the accounts of local authorities that would act to control the disposition of capital resources. This reserve has been termed the 'capital expenditure reserve' within this report.
- 7.4 This reserve would operate most simply by being debited with the cost of fixed assets when capital investment is made and credited with appropriations of income from revenue accounts equal to the total depreciation charge for each financial year.
- 7.5 In a world where capital expenditure was only financed through the application of depreciation, the following would then occur:
- (a) a positive balance on the new reserve would mean that more had been charged through depreciation to date than had been historically spent on fixed assets. As this discussion paper has demonstrated, this is a possible scenario where the depreciation charge is made on current valuations rather than historical cost, as is the case for most local authority fixed assets
  - (b) a negative balance on the new reserve would mean that less had been charged through depreciation to date than had been historically spent on fixed assets. This negative balance would represent the amount of cash that had been spent on fixed assets that still needs to be resourced. Consideration could then be given to the authority's overall cash position and to its treasury management strategy and policies in order to determine whether or not external borrowing was necessary as a result of this 'capital' cash shortfall.
- 7.6 However, the continuation of the capital/revenue split may also mean the continuation of the following current practices in local government, which also have no basis in UK GAAP but which follow on from statute:

- (a) the requirement to credit capital receipts to specified reserves
  - (b) the practice of funding capital investment directly from revenue.
- 7.7 If these current practices continue into the new system, then it is recommended that consideration is given to crediting all 'capital' resources to the capital expenditure reserve.
- 7.8 If this was done then the following would occur:
- (a) where the balance on the capital expenditure reserve is negative, it would represent the amount of capital expenditure incurred that had yet to be financed through
    - revenue, whether through direct capital financing, via a depreciation charge that 'hits the bottom line' or through the current/replacement minimum revenue provision (England and Wales)/loans fund repayments (Scotland) mechanisms
    - the receipt of capital grants
    - the receipt of capital receipts
  - (b) where the balance on the capital expenditure reserve is positive, it would mean that more 'capital' resources had been charged to revenue (as above) and received through capital grants and receipts than total capital expenditure to date
  - (c) where negative, the balance on the capital expenditure reserve would represent the underlying need to borrow from past capital investment – the actual need for external borrowing would depend on the local authority's overall cash position and treasury management strategy
  - (d) where positive, the balance would represent part of the authority's overall cash/investments position.
- 7.9 This would have the following benefits:
- (a) it could considerably reduce the number of non-UK GAAP type reserves that local authorities are required to keep

- (b) it would identify on the face of the balance sheet the underlying need to borrow for capital purposes by the local authority a figure that both local and central government view as having significant policy import.

7.10 It would have good synchronisation with the proposals within the exposure draft of the CIPFA prudential code because:

- (a) the charging of depreciation which 'hits the bottom line' would support the long term sustainability of capital investment
- (b) the balance on the new capital expenditure reserve bears a very close relationship to the figure termed 'capital expenditure unfinanced' within the draft prudential code
- (c) the difference is that all capital receipts (whether currently reserved, usable and applied, or useable and unapplied) and capital grants (whether currently applied or unapplied) would be credited to the reserve, so that the balance represents the true underlying need to borrow for capital expenditure incurred
- (d) it would lead to considerable simplification of the requirements within the prudential code as a result of (a) – (c) above
- (e) the prudential code as currently drafted will increase transparency but the changes suggested here would lead to further increases in transparency
- (f) for individual local authorities, it will facilitate the setting of prudential limits for borrowing by clearly identifying the current underlying need to borrow for capital purposes and providing a simpler mechanism for estimating future requirements.

7.11 It is not necessary to understand the detail of the double entry accounting processes that would be involved in order to consider this proposal. However, an illustrative example of the entries that would be involved is included as Appendix A to this discussion paper.

## 8 APPLYING A DEPRECIATION MODEL WITHIN LOCAL GOVERNMENT — A CASH BALANCE OPTION

- 8.1 The cash balance option for a depreciation based accounting system is concerned with monitoring the surplus or deficit generated in an authority's cash balances as a result of capital activity.
- 8.2 This option would not require special accounting arrangements over and above those of UK GAAP except for the separation of the cash balance into revenue and capital elements, which would need to be established through statute.
- 8.3 Under this option, memorandum entries would be made that would reduce the memorandum balance for capital cash by the amounts spent on fixed assets. Memorandum entries would also be made to increase the memorandum balance for capital cash by an amount equal to the income that is raised in the revenue account to balance the depreciation charged to the revenue account. **NB** These would only be memorandum items, for information.
- 8.4 In a world where capital expenditure was only financed through the application of depreciation, the following would then occur:
- (a) a positive balance on the capital cash memorandum balance would mean that more had been charged through depreciation to date than had been historically spent on fixed assets
  - (b) a negative balance on the capital cash memorandum balance would mean that less had been charged through depreciation to date than had been spent on fixed assets.
- 8.5 In addition, as recognised in section 7 of this report, the following current practices (which have no basis in UK GAAP but follow on from statute) may continue into the new system:
- (a) the requirement to credit capital receipts to specified reserves
  - (b) the practice of funding capital investment directly from revenue.

Marrying these items together with the memorandum cash balance would be difficult but not impossible.

- 8.6 The cash balance option could, longer term, provide a further staging post in a transition from the reserves option outlined in section 7 and full UK GAAP accounting.
- 8.7 An illustrative example of the cash balance option is included as Appendix B to this report.

DISCUSSION PAPER

## 9 APPLYING A DEPRECIATION MODEL WITHIN LOCAL GOVERNMENT — ISSUES OF OVERALL AFFORDABILITY AND THE POSSIBILITY OF A PHASED INTRODUCTION

9.1 The white paper ‘Strong Local Leadership — Quality Public Services’ states:

“... Some responses also highlighted the desirability of moving towards a system which would better reflect true depreciation costs, an objective which the Government shares, although there would be issues of affordability to be addressed in such a move.”<sup>7</sup>

9.2 The introduction of a depreciation model within local government would have a very significant impact in terms of the need to generate resources. Currently, depreciation is charged within the service accounts of local authorities, but this is in effect reversed out of the accounts prior to establishing the annual financing requirement for the authority and replaced with the statutorily determined minimum revenue provision (England and Wales)/loans fund repayment (Scotland). There is one exception to this currently : for the HRA in England, depreciation equal to the major repairs allowance for the authority (calculated as part of housing subsidy) is charged to ‘the bottom line’.

9.3 Therefore full depreciation accounting would have huge ‘bottom line’ impact. This would need to be taken into account by national government and devolved administrations during spending reviews, and by local government during budget setting.

9.4 In any examination of this impact, in addition to depreciation that is currently charged within the service accounts of local authorities, the following should be taken into consideration.

- (a) **FRS 15 requirements.** The requirements of FRS 15 were incorporated within the local authority accounting SORP for financial years ending on or after 1 April 2000. Whilst these requirements came into effect some two years ago, their full impact will only be felt once all the assets that are valued at current value have been re-valued following its introduction. Also, it is likely that there would be increased interest in this aspect by local authorities if depreciation related to a real resource.

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<sup>7</sup> *Strong Local Leadership – Quality Public Services*, DTLR, December 2001, Part II paragraph 4.26

- (b) **Infrastructure assets.** Currently, within local authority accounts, infrastructure assets such as roads are required to be valued at depreciated historical cost. This is in contrast to the majority of local government assets, which are carried at current value. As part of a review of capital accounting that CIPFA is undertaking, an evaluation is under way of the current approach to the measurement of infrastructure assets, focusing on the advantages and disadvantages of moving from a depreciated historical cost to current value as the measurement basis.
- (c) **Impairment.** For local authorities, impairment is a reduction in the value of a fixed asset below its carrying amount in the balance sheet. This can be caused by, for example:
- a significant decline in a fixed asset's market value
  - evidence of obsolescence or physical damage to the fixed asset
  - a significant adverse change in the statutory or other regulatory environment in which the authority operates
  - a commitment by the authority to undertake a significant reorganisation.

Where an impairment loss on a fixed asset is caused by a clear consumption of economic benefits (eg physical damage or a deterioration in the quality of the service provided by the asset, ie if it is similar in nature to depreciation) it should be recognised in the service revenue account. Other impairments (reflecting a general fall in prices) should be recognised in the fixed asset restatement reserve and not the revenue account. It would be logical for impairment that is recognised in the service revenue account to be treated like depreciation if full depreciation accounting is introduced.

- (d) **Deferred charges.** Deferred charges are currently financed using capital resources. If deferred charges continue into the new framework, it would be logical for the amortisation of deferred charges to be treated in the same way as the depreciation of fixed assets.
- (e) **MRP/loans fund repayments.** It would not be logical to require local authorities to make a charge in their revenue accounts for MRP (England and Wales) /loans fund repayments (Scotland) in addition to making a full charge for depreciation, depreciation-type impairment and the amortisation of deferred charges.

- (f) **Other long term liabilities.** Currently, in addition to setting aside resources to repay borrowing, in England and Wales the MRP incorporates the statutory charges to revenue in relation to credit arrangements/other long term liabilities. Under the prudential framework, it would be logical for charges to be made to revenue for other long term liabilities as required by UK GAAP as incorporated within the local authority accounting SORP. This would also need to be taken into account when considering affordability.
- (g) **PFI schemes.** Currently, revenue support for PFI schemes is given through the capital finance system, even where the PFI schemes are 'off balance sheet' and therefore expenditure on them is revenue, not capital, expenditure. Consideration would need to be given to the method for central support for such schemes within the new framework.
- 9.5 If it is desired to gradually phase in the requirement for local authorities to charge depreciation to the bottom line, then this would be possible technically.
- 9.6 The easiest way of phasing in the depreciation charge would be through the reserves option described in chapter 7, by means of additional journal entries between the appropriations section of the consolidated revenue account and reserves, in order to limit the impact on the bottom line of the local authority.
- 9.7 However, it must be recognised that, because of statute with respect to capital finance, local authorities are currently not retaining sufficient income to cover the real costs of the using up of capital assets. Any phased introduction would perpetuate this situation, albeit to lesser extent than is currently the case.



## 10 LINKS BETWEEN DEPRECIATION AND THE PRUDENTIAL CODE, GOVERNMENT FISCAL STRATEGY AND THE WHOLE OF GOVERNMENT ACCOUNTS PROGRAMME

### The prudential code

- 10.1 The current capital control frameworks in England, Wales and Scotland are being reviewed by central government and devolved administrations in partnership with local government.
- 10.2 Announcements have been made in England, Wales and Scotland that a new prudential framework will be adopted, under which individual local authorities will be responsible for deciding how much they can afford to borrow.
- 10.3 At the request of the government, CIPFA is preparing a *Prudential Code for Capital Finance in Local Authorities* (the prudential code) to underpin the new framework. An exposure draft of the prudential code was published for consultation by CIPFA in December 2001. CIPFA is also undertaking road testing of the draft prudential code during 2002 with 37 local authorities throughout England, Wales and Scotland.
- 10.4 The draft prudential code requires local authorities to consider the short and medium term affordability and the long term sustainability of their capital investment.
- 10.5 The draft prudential code has been designed to be operable by local government whatever system is prescribed by central government and devolved administrations for charging the impact of capital investment to the revenue account. When they consider the affordability of capital investment, under the draft prudential code one of the things that local authorities will be required to take into account is:
- “whatever supersedes the current requirements for minimum revenue provision (England and Wales)/loans fund repayments (Scotland)”.<sup>8</sup>
- 10.6 Under the prudential system, whilst other options are possible, consideration by local authorities of the affordability and long term sustainability of capital investment would be far more straightforward if current statutory requirements are replaced with the requirement for full depreciation

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<sup>8</sup> CIPFA *Prudential Code for Capital Finance in Local Authorities*, Exposure Draft for consultation December 2001, paragraph 37.

accounting to be undertaken, and charged to the bottom line of local authority accounts. This is because full depreciation accounting is specifically designed to charge to the revenue account the economic benefits that are consumed by the using up of fixed assets.

10.7 The draft prudential code also requires:

“In considering the affordability of its capital plans, the authority is required to consider all of the resources currently available to it/estimated for the future, together with the totality of its capital plans and revenue forecasts for the forthcoming year and the following two years.”<sup>9</sup>

The amount of central government/devolved administration support for the authority’s capital investment will be a significant element of this.

10.8 Again, the draft prudential code has been designed to operate whatever method/methods of central support is/are used in the future for local government capital investment.

10.9 Under the prudential system, whilst other options are possible, a primary method of support based on the depreciation charged would fit well with the new framework. This is once again because full depreciation accounting is specifically designed to charge to the revenue account the economic benefits that are consumed by the using up of fixed assets.

10.10 It is emphasised that the prudential framework is achievable without the introduction of depreciation accounting. However, depreciation has a good fit with the framework.

### **The government’s fiscal strategy**

10.11 Depreciation accounting also fits well with the government’s fiscal strategy.

10.12 Primary objectives of the government’s fiscal strategy are to ensure the sustainability of the public finances, and fairness between generations.

10.13 The operation of the golden rule<sup>10</sup> has a direct relationship to depreciation accounting. This is because the key indicator for the golden rule is the average current budget over the economic cycle, where the current budget is

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<sup>9</sup> Paragraph 36,

<sup>10</sup> The golden rule : over the economic cycle the Government will borrow only to invest and not to fund current spending.

defined as the difference between current receipts and current expenditure including depreciation.

### **Whole of government accounts programme**

- 10.14 The government is committed to producing whole of government accounts as a step in ensuring that best practice accounting methods are used to construct the public accounts and that fiscal reporting is as transparent as possible, as required by the Government's *Code for Fiscal Stability*.
- 10.15 It is particularly pertinent to note that it is intended that whole of government accounts will provide audited data to underpin the operation of the golden rule, and will allow the public sector balance sheet to be used in fiscal management.
- 10.16 CIPFA is working with HM Treasury with respect to their consideration of the inclusion of local authority accounts within whole of government accounts.
- 10.17 In this context, a number of differences have been identified between local and central government accounting, which would complicate the production of whole of government accounts. These differences largely flow from specific statutory requirements for local government. The most significant differences relate to accounting for fixed assets.
- 10.18 The review of the current capital control frameworks offers the opportunity for changes to the statutory controls that lead to these differences. This would facilitate the production of whole of government accounts, as well as the operation of the prudential framework.

### **Conclusion**

- 10.19 There are thus a number of factors that, together, support the further consideration of applying full depreciation accounting to local government accounts. In practical terms, this could be done either in one step, or on a phased basis over time.

## APPENDIX A EXEMPLIFICATION FOR SECTION 7

This appendix contains an illustrative example of the double entry accounting processes that would result from the introduction of the 'reserves option' outlined in section 7 for applying a depreciation model within local government. It shows journal entries in relation to the acquisition by a fire authority of a new station, fire tenders and firefighting equipment, and the application of depreciation based on current values that 'hits the bottom line'. In this example, in order to show the effects of the application of depreciation most clearly, no capital receipts or direct financing of capital expenditure to revenue are included.

The fire authority acquires assets at the following cost and useful lives:

	<b>Cost</b>	<b>Useful life</b>
Station	£700,000	50 years
Fire tenders	£1,000,000	10 years
Equipment	£400,000	5 years
	<hr/>	
	£2,100,000	
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The exemplification assumes that this level of expenditure is agreed as both affordable and prudent. Then, at the point of acquisition of assets, cash is needed to meet the payments, but resourcing issues do not arise. The fire authority acquires the assets, puts them on its balance sheet, and borrows £2.1m cash to meet the outlay. The acquisition would result in a debit to the capital expenditure reserve of £2.1m, recording a resource deficit that will need to be made good:

debit	Fixed assets	£2,100,000
credit	Cash	£2,100,000

Recording the payment of cash in return for the acquisition of fixed assets.

debit	Capital expenditure reserve	£2,100,000
credit	Capital financing reserve	£2,100,000

Marking the need for resources to be set aside in the future for the acquisition by reducing the balance of the capital expenditure reserve.

debit	Cash	£2,100,000
credit	Loans	£2,100,000

Borrowing cash to cover the resource deficit.

**NB** Any actual external borrowing taken out/repaid is not debited or credited to the new capital expenditure reserve. The only accounting entries for external borrowing will remain, as now, a debit to cash and a credit to loans when borrowing is taken on and a debit to loans and a credit to cash when it is repaid.

The result of these transactions is that the authority has fixed assets that cost £2.1m and a capital expenditure reserve with a balance of minus £2.1m, with borrowings of £2.1m.

Once the fixed assets are in the balance sheet and brought into use by the fire authority, their use will be recognised by the charging of depreciation. The precise methods for depreciating are not specified in UK GAAP, provided that the method chosen reflects fairly the pattern in which an asset's economic benefits are consumed. In this exemplification, depreciation is charged each year on the value of assets at the start of each year, divided by the useful life left at that date.

At the same time as an asset's economic benefits are being consumed, the value of its remaining benefits might be increasing, generally by the effect of inflation or specifically if demand for them is rising. For the purposes of this exemplification, it is assumed that the value of the fixed assets in the balance sheet commences at the same level as their cost, and is rising by 5% each year. **NB** This is for the purpose of the exemplification only, it is not meant to imply a requirement for annual indexation.

In Year 1, these accounting policies result in the following depreciation charges:

	<b>Value</b> A	<b>Useful life</b> B	<b>Depreciation</b> (A/B)
Station	£700,000	50 years	£14,000
	£1,000,000	10 years	£100,000
	£400,000	5 years	£80,000
	£2,100,000		£194,000

These charges are accounted for as follows:

debit	Revenue account	£194,000
credit	Fixed assets	£194,000

Charging depreciation to a revenue account as an expense for the year, and reducing the value of fixed assets by the value of the economic benefits consumed that year.

Because this depreciation charge hits the bottom line, the budget requirement for the authority will be greater than it would be without the depreciation charge.

debit	Cash	£194,000
credit	Revenue account	£194,000

Raising the additional income to cover the expense of the depreciation charge being charged to the revenue account.

**NB** This means that the income raised by the local authority (whether through revenue support, local taxation or other income) needs to be £194,000 more in year 1 than it would have been without this transaction. Nationally, these differences, which result from the application of depreciation accounting hitting the bottom line would need to be taken into consideration during spending reviews, and locally during budget setting.

debit	Revenue account	£194,000
credit	Capital expenditure reserve	£194,000

Transferring the resources from the generation of additional income to the reserve for future capital investment.

debit	Capital financing reserve	£194,000
credit	Revenue account	£194,000

Removing the depreciation charge below-the-line of the revenue account so that (after the matching income has been transferred out) it cannot have a double effect on the bottom line.

**NB** An alternative for the above two pairs of journal entries would be

debit	Capital financing reserve
credit	Capital expenditure reserve

Transferring an amount equal to the resources generated from the charging of depreciation to the bottom line into the capital financing reserve.

However, this would involve a transfer directly between reserves, which is technically less correct than putting both of the reserve entries through the revenue account.

Either way, the overall effect is to increase the balance at the end of Year 1 on the capital expenditure reserve from minus £2,100,000 to minus £1,906,000.

In subsequent years, the depreciation charge will increase as the underlying value of the assets increases. For instance, in Year 2 the charges can be calculated as:

	Value of undepriciated asset A	Depreciation to date B	Depreciated value of asset (A - B) = C	Remaining useful life D	Depreciation (C/D)
Station	£735,000	£14,000	£721,000	49 years	14,714
Fire tenders	£1,050,000	£100,000	£950,000	9 years	105,556
Equipment	£420,000	£80,000	£340,000	4 years	85,000
					205,270

At the end of Year 5, the cumulative total of depreciation charges that would have been made to the revenue account would be £1,131,187:

### Depreciation

Station	£77,677
Fire tenders	£567,307
Equipment	£486,203
	£1,131,187

Aftger 5 years, the debit balance on the capital expenditure reserve would have been reduced from £2.1m to £968,813.

The full meaning of these figures can be illustrated by looking in more detail at the figures relating specifically to the equipment assets, which came to the end of their useful life at the end of Year 5.

The balance on the capital expenditure reserve relating to equipment transactions will actually be positive, even though the aggregate balance is minus £968,813. £400,000 will have been debited upon acquisition of the equipment assets. But over their useful life £486,203 has been credited as income, covering depreciation charges that have been made from the revenue account for the equipment. Charging

depreciation has therefore resulted in the generation of £86,203 of resources in excess of those needed to cover the actual cash outlay on the original assets.

This approach effectively ensures that when the replacement of assets is due this can be done without increasing the authority's need to borrow for capital purposes. Under this scenario, the fire authority would have sufficient cash-backed resources to acquire replacement assets (if it so chose) without any need to increase its level of borrowings. If it did so, it would be a steady state option for asset replacement, but one that perpetuates an underlying borrowing requirement for capital purposes fixed at the level of the original historical cost of unfinanced assets owned or acquired at the date of the system's commencement.

Alternatively, if the authority required fewer fixed assets, its underlying need to borrow for a capital purpose would be reduced; if the authority acquired more fixed assets, its underlying need to borrow for a capital purpose would be increased.

The charging of depreciation based on the current values of fixed assets to the bottom line would generate the resources needed to sustain fixed assets in the long term, thus assisting service delivery.



## APPENDIX B EXEMPLIFICATION FOR SECTION 8

This appendix contains an illustrative example of the double entry and memorandum accounting processes that would result from the introduction of a 'cash balance option' outlined in section 8 for applying a depreciation model within local government. It uses the same basic data as is used in Appendix A, the acquisition by a fire authority of a new station, fire tenders and firefighting equipment, and the application of depreciation based on current values that 'hits the bottom line'. In this example, in order to show the effects of the application of depreciation most clearly, no capital receipts or direct financing of capital expenditure to revenue are included.

The fire authority acquires assets at the following cost and useful lives:

	<b>Cost</b>	<b>Useful life</b>
Station	£700,000	50 years
Fire tenders	£1,000,000	10 years
Equipment	£400,000	5 years
	<hr/>	
	£2,100,000	
	<hr/>	

Acquisition would result in the following accounts entries:

debit	Fixed assets	£2,100,000
credit	Cash	£2,100,000

Recording the payment of cash in return for the acquisition of fixed assets.

**NB** The memorandum capital cash balance would also be decreased by £2,100,000.

debit	Cash	£2,100,000
credit	Loans	£2,100,000

Borrowing cash to cover the overall cash deficit created by the outlay on capital assets.

**NB** The memorandum capital cash balance would not be affected when borrowing is taken out or repaid.

The result of these transactions is that the authority has fixed assets worth £2.1m with borrowings of £2.1m to square the overall cash balance. If the starting cash balance was £0 before these transactions,

then the closing cash balance would be £0. However, the memorandum capital cash balance would be minus £2,100,000.

Once the fixed assets are in the balance sheet, depreciation will be charged in exactly the same way as for the reserve option, reflecting the pattern in which the assets' economic benefits are consumed. In Year 1, the following accounts entries would be made:

debit	Revenue account	£194,000
credit	Fixed assets	£194,000

Charging depreciation to a revenue account as an expense for the year, and reducing the value of fixed assets by the value of the economic benefits consumed that year.

debit	Cash	£194,000
credit	Revenue account	£194,000

Raising the additional income to cover the expense of the depreciation charge being charged to the revenue account.

**NB** The memorandum capital cash balance would increase by £194,000.

There is no need under this option for a capital expenditure reserve to record any movements in the disposition of resources. The impact can be retained in the revenue account – if the revenue account breaks even after the charging of depreciation, then the authority is in a neutral resource position. However, its capital cash balance has been improved by £194,000, providing the potential for the loans to be partially repaid.

At the end of Year 5, the total of depreciation charges to the revenue account of £1,131,187 would have generated matching improvements in the capital cash balance. The deficit would now only be £968,813 rather than the original £2.1m.

The equipment assets might need replacing at this point. However, the key determinant in assessing whether this is affordable would not be the level of deficit on the capital cash balance. Instead, the important criterion would be the headroom created in the revenue account by the fact that there would otherwise be no depreciation charge for equipment assets in Year 6, giving a surplus of more than £120,000 to apply. The decision to replace the equipment would therefore be controlled by the size of the depreciation charge that new investment would generate. The level of government grants, and the ability to raise council tax would influence affordability from the income side.

The revenue account control would constrain authorities to act prudently. However, the replacement of the equipment would have a potentially important impact on capital cash. Charging depreciation on the equipment assets would have generated cash to the value of £486,203 against an actual historical cost of £400,000, giving a capital cash surplus of £86,203.

The cash surplus does not directly give any additional spending power, but does mean that if the equipment is replaced the surplus can be applied in avoiding having to borrow to meet the full cost of the new assets. The option can therefore be a steady-state one, generating sufficient cash surpluses over the life of assets such that their replacements can be acquired without increasing the borrowing requirement created by the original acquisition.

The cash balance option does not require any special arrangements in the event of a need to increase the fire authority's holding of fixed assets rather than just perpetuating them. Provided that it is prudently assessed that income can be generated to cover the resultant depreciation charges over the asset's life, then the investment is affordable for the authority.

However, outlay on the new assets will lead to a direct increase in the capital cash deficit and, depending on the authority's overall cash position and treasury management strategy, the need to borrow. In addition to the issue of affordability, it will be important that total borrowing is kept within prudent limits.

DISCUSSION PAPER