



Modelling business plans for council landlords  
**Report on model inputs assumptions and outputs**



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PricewaterhouseCoopers

February 2011  
Department for Communities and Local Government

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# Executive summary

## Background and introduction

1. PricewaterhouseCoopers LLP (PwC) was appointed to provide expert financial and technical support to the Department for Communities and Local Government (DCLG) team leading a project to develop a devolved system for the financing of council housing in England.
2. The project follows on from the work undertaken in phase one and seeks to provide a straightforward financial model and advice to DCLG on the inputs to the financial model, including the values and assumptions used at a national and local level and how the national average cost uplifts established through phase one of the review might be disaggregated locally.
3. It built upon the earlier work and moved it forward to a position where a proposal could be made to each local housing authority. Initial proposals were published for consultation by the Department in March 2010 in the prospectus: *Council housing: a real future* at which time PwC's report: *Modelling business plans for council landlords. Report on model inputs, assumptions and outputs* was also made available. The PwC report published in March 2010 set out much of the rationale behind the assumptions used in the financial models. This report has been prepared to include the considerations and updates made between March 2010 and early 2011.
4. It is important to remember that "self-financing" is intended to replace the current housing revenue account subsidy arrangements. Consequently, the proposals under self-financing should be compared with the position that might prevail if the housing revenue account subsidy arrangements were to continue.
5. The self-financing proposals are designed to provide greater independence at a local level and, with this, enhance local responsibility and accountability for the investment in homes and housing services provided. The proposals will also transfer clearer responsibility for some risks from central to local government (for example the potential for cost overruns and unforeseen investment needs) and this risk transfer has been considered in the assessments undertaken.
6. The following paragraphs summarise key elements of the report. Further details are set out in the main body.

## Net present value inputs

7. The information contained in the 2011-12 subsidy determination "Comdata" worksheet has been used as a base from which to build the key inputs into the net present value calculation.

## Rental income

8. The average guideline rent (before caps and limits) taken from the 2011-12 housing revenue account subsidy determination has been used as the starting point

in the calculation. Guideline and formula rents are assumed to converge by 2015-16 in the base scenario of the model.

***Revised management, maintenance and major repairs “allowances”***

9. The changes to the management and maintenance allowance formulae described in this report deliver a greater increase in allowances for London authorities and for some other councils with larger stock numbers (these tend to have a more mixed portfolio of dwellings). In overall terms, the changes increase the total of national management allowances by slightly below 9 per cent, the maintenance allowances by just below 4 per cent and the combined allowance for management and maintenance by 5.7 per cent, all of which is in keeping with the overall findings of phase one review.

10. The proposed increases to management and maintenance allowances following the revisions are in the range 0 per cent to 13.4 per cent when compared to the subsidy allowances calculated for 2011-12 for individual authorities, before any transitional protection is applied. The increase in management and maintenance allowances arising from these changes is taken into the starting assumptions in the self-financing model.

11. The research in Phase one concluded that nationally the average “revised major repairs allowances” (at 6 per cent annual discount rate) for tackling newly arising stock investment needs weighted across all housing archetypes was approximately £825 per dwelling which is 24 per cent higher than the national average major repairs allowances in 2008-09.

12. After deriving the average major repairs allowance per dwelling for each archetype and for five year bands, the phase one report made an assumption that only 95 per cent of this amount would be required on the basis that 5 per cent of the newly arising need in any one year is not dealt with. However, it was considered that it was difficult to justify this approach, as over time all works will need to be completed, and so the major repairs allowance per dwelling for each archetype has been increased to reflect the costs of 100 per cent of the work identified. The use of 100 per cent of the costs has had the effect of increasing the annualised major repairs allowance per dwelling over 30 years for all archetypes to £873.00.

13. The costs in the calculation of the revised major repairs allowances in phase one of the project were in a 2008-09 price base. For phase two these costs have been uplifted for each authority to produce the revised annualised major repairs allowance per dwelling for 2011-12 for each local authority. This figure is then compared to the 2011-12 major repairs allowance in the subsidy determination to establish the uplift to be applied for each council.

14. Updating this work to reflect the 6.5 per cent discount rate used in the valuation, the percentage increases in major repairs allowance for each council, that results from the calculations, range between 7.6 per cent and 52.2 per cent, and the average increase is 28.85 per cent, resulting in an average major repairs allowance of £934 per dwelling at a 2011-12 price base.

15. For the purposes of inclusion in the debt calculation it is accepted that the total increase in management and maintenance and major repairs allowances together is more relevant than the increases in the individual allowances. The combined increases range from 5.8 per cent to 16.6 per cent of the corresponding numbers in 2011-12 allowances.

***Net present value debt allocation***

16. In view of the approach taken in calculating the allowances for the debt calculation, it is suggested that a discount rate typical of that used in many recent housing transfer valuations (6.5 per cent) is appropriate. This is explained further in the report. Such a real rate recognises that the actual costs incurred by an authority in managing, maintaining and repairing properties may not necessarily be fully reflected in the complex allowances used in the net present value calculation.

17. In the housing subsidy determination the estimated total debt in the subsidy calculation at the end of 2011-12 is £21.044bn.

18. The following table shows the calculation of the net present value of the projected net income stream over 30 years at a 6.5 per cent annual discount rate.

<b>Scenario</b>	<b>Valuation</b>
Base (rents less revised management and maintenance and major repairs allowances)	£28.42bn
The current level of debt assumed is:	
2011-12 subsidy capital financing requirement	£21.04bn

***Debt allocation and debt adjustment***

19. The debt allocation per dwelling shows a range from £4,700 to £38,250. If the debt allocation divided by the “simple” annual operating surplus per dwelling (taken as the first year guideline rent less management and maintenance and major repairs allowances) is considered, it produces a far narrower distribution with most councils’ debt per dwelling being between 14 and 26 times the annual simple operating surplus.

20. It is proposed that councils will make or receive a payment to move their subsidy capital financing requirement debt to the debt indicated in the net present value calculation.

# 1 Background and introduction

## Background

1. The Department for Communities and Local Government (DCLG) published a consultation document *Reform of Council Housing Finance* on 21 July 2009. This included an option of dismantling the current Housing Revenue Account Subsidy system and replacing it with a 'self-financing' system. Under self-financing, council landlords would support their own stock in future from their own income and would no longer be part of an annual subsidy relationship with central Government.
2. PricewaterhouseCoopers LLP (PwC) was appointed in December 2009 to provide expert financial and technical support to the DCLG team leading a project to develop a devolved system for financing council housing. The requirement of this second phase of the project was to develop and run a financial model for self-financing business plans for local authority landlords, based on cash flows over 30 years. The requirement of the project brief was that: *"The model should allow DCLG to assess the national impact of these plans in aggregate, and in particular to forecast the amount of borrowing which the business plans would require each year and to compare this with the amount of debt which the businesses could support."*
3. This project followed on from the work undertaken in phase one and sought to provide advice to DCLG on the inputs to the model, including the values and assumptions used at a national and local level and how the national average cost uplifts established through phase one of the review might be disaggregated locally.
4. It built upon the earlier work and moved it forward to a position where a proposal could be made to each local housing authority. Initial proposals were published for consultation by the Department in March 2010 in the prospectus: *Council housing: a real future* at which time PwC's report: *Modelling business plans for council landlords. Report on model inputs, assumptions and outputs* was also made available. The PwC report published in March 2010 set out much of the rationale behind the assumptions used in the financial models. This report has been prepared to include the considerations and updates made between March 2010 and early 2011.

## Introduction

5. Throughout the project it has been important to remember that "self-financing" is intended to replace the current housing revenue account subsidy arrangements. Consequently, the proposals under self-financing should be compared with the position that might prevail if the housing revenue account subsidy arrangements were to continue. Self-financing will provide greater independence at a local level and, with this, will enhance local responsibility and accountability for the housing services provided and for the investment in homes. The proposals will also transfer clearer responsibility for some risks from central to local government (for example the potential for cost overruns



and unforeseen investment needs) and this risk transfer has been considered in the assessments undertaken.

6. The main outputs from the project are, at a national and local authority level, a net present value discounted cash flow assessment of each landlord's notional business and an indicative "notional" business plan (both reflecting the elements in the subsidy calculation). The former provides the level of debt it is considered that a local authority could reasonably support and the latter provides an indication that the debt allocated is affordable.
7. The main inputs on which the revised net present value is calculated for each council are now derived from the 2011-12 subsidy determination. The key items in the subsidy determination are:
  - Dwelling numbers
  - Average formula rent
  - Average guideline rent (at 98 per cent collection)
  - Anticipated rent limitation allowance, where applicable, (to reflect the limits part of the caps and limits calculation)
  - Management and maintenance allowances
  - Major repair allowance
  - Private finance initiative allowances (for schemes currently signed or to be signed by April 2011)
  - Arms-length management organisation subsidised capital expenditure
  - Other reckonable expenditure
8. The above are further explained in the following sections of this paper.
9. The main assumptions used to calculate the net present value are:
  - An annual discount rate of 6.5 per cent real
  - Rents increasing in line with current policy
  - Management, maintenance and major repairs allowances increasing in line with inflation
10. The outcome of the net present value calculation is then compared with an authority's current subsidy capital financing requirement to give the increase or reduction to the authority's housing debt to be applied in each case.

## **Developing the net present value inputs**

### ***2011-12 subsidy determination “Comdata” sheet***

11. The information contained in the 2011-12 subsidy determination (“Comdata” worksheet) has been used as a base from which to build the key inputs into the revised net present value calculation.

### ***Dwelling numbers***

12. These are taken from the “Comdata” sheet as appropriate to the calculation (for rents, management, maintenance or major repairs).

### ***Demolitions***

13. Data on dwelling numbers taken from the “Comdata” sheet will not take account of future demolitions and the effect this will have on income and costs. DCLG have agreed to consider reasonable estimates of demolitions planned in the near term with the possibility of reflecting them in the valuation. The model has the functionality to do this but no estimate has been included for the modelling discussed in this document.

### ***Future Right to Buy sales***

14. The reduction to be made to each local authority’s stock based on the attributed level of Right to Buys allocated against each local authority over time is based on an assumed national level of Right to Buys each year derived from forecast assumptions supplied by HM Treasury. The allocation for each region is derived from the analysis of sales in each region in the last three years. The Right to Buy allocated against each local authority is calculated based on the regional allocation and then the relative stock held by that local authority against all local authorities in that region. Each year each council will be “allocated” a percentage of the nationally assumed Right to Buy total sales in line with these calculations.

### ***Formula rents***

15. The average formula rents taken from the 2011-12 housing revenue account subsidy determination are used as the starting point in the valuation. Formula rents have been assumed to increase at 0.5 per cent above the Retail Prices Index throughout the model, in accordance with current policy.

### ***Guideline rents***

16. The average guideline rent (before caps and limits) taken from the 2011-12 housing revenue account subsidy determination has been used as the starting point in the valuation. The rents have been uprated by 0.5 per cent above Retail Prices Index throughout the model plus the difference between the formula and guideline rent divided by the number of years to convergence. Each year 2 per cent is deducted from the total guideline rent, to reflect the

percentage of voids currently assumed in the subsidy determination. This is in accordance with current policy.

### ***Rent convergence***

17. Rents are assumed to converge by 2015-16 in the base scenario of the model.

### ***Rent caps and limits***

18. Currently the caps and limits adjustment is paid to authorities one year in arrears as part of the housing revenue account subsidy determination, and is based upon data provided by the local authority. The limits part of the adjustment compensates authorities where rent increases on individual dwellings have been constrained by the maximum limit of Retail Prices Index plus 0.5 per cent + £2 in any one year, and has the effect of reducing actual rental income for the authority below the guideline level. Future projections of the limits have been prepared based on average rent data for each authority.
19. The caps part of the adjustment is where the actual rent for individual properties within an authority exceeds the national cap on the formula rent for the relevant bed size. The caps adjustment relates to very few authorities and is likely to diminish each year. It has therefore been determined that the caps adjustment should not be included in the self-financing net present value model.
20. For the purposes of the limits adjustment, which is more significant, data provided by local authorities to DCLG on the average actual weekly rent per dwelling in 2010-11 for each local authority (52-week basis) has been used as the starting point for the calculation.
21. The actual average rent for each authority for future years has been projected, calculated as the minimum of the average unconstrained rent (following gradual convergence) and the average constrained rent. Where an authority's average constrained rent is less than its unconstrained rent, the weekly limit adjustment is the difference between the two. Where the authority's constrained rent is more than its unconstrained rent, there is no adjustment. Based upon this average rent projection, the limits adjustment disappears for all authorities in about ten years (and for a significant proportion a few years before this). This adjustment has been applied, where required, in the self-financing model, as a reduction to the guideline rent.
22. It is acknowledged that the method used to calculate the limits adjustment on an average rent basis for each local authority may not accurately reflect the limits adjustment that would be required had the calculation been carried out on an individual dwelling basis. However, it was not considered possible to project the actual rent forward on an individual dwelling basis, for 1.7 million homes in 171 authorities, and therefore it was concluded that the method adopted is the most suitable way of including the limits adjustment in the self-financing model. The inclusion of the limits adjustment provides compensation to councils for continuing to implement rent increase constraints in line with the current

arrangements to the benefit of tenants and with the consequential loss of rent income.

### ***Management and maintenance allowances***

23. The management and maintenance allowances in the “Comdata” sheet have been adjusted with a view to reflecting the findings from the earlier phase one work. The phase one work considered management and maintenance allowances together and this approach has been continued as it is underpinned by two key observations:
  - a. There are areas of expenditure, for example the management of the responsive repairs service and certain estate management functions, which are difficult to allocate accurately to management and maintenance budgets. The degree of overlap is considered sufficiently large to undermine efforts to be confident in any separate comparisons of actual spending against allowances.
  - b. Whilst the allowances are calculated separately in the subsidy determination, each local authority is free to determine its own balance of expenditure on management and repairs. The phase one research suggested that anecdotal evidence indicates that the balance of expenditure frequently does not reflect the balance of allowances.
24. The research in phase one suggested a national overspend compared to management and maintenance allowances of 5 per cent. It suggested that this comprised of a maintenance overspend of 3 per cent and a management overspend of 8 per cent. The series of analyses in the report by region, authority type and so forth was undertaken on the combined management and maintenance allowances and spending.
25. In phase two we have taken the key messages from the phase one work and considered appropriate adjustments to the calculation of allowances in the housing revenue account subsidy that would produce outcomes broadly in line with the phase one findings. As the management and maintenance allowances are calculated separately in the subsidy determination, we explain the changes made to each in the following paragraphs.

### ***Management allowance***

26. The current management allowance formula is made up of a base cost plus an amount per dwelling, (with the latter differing depending on whether the authority has less or more than 1,400 dwellings). Adjustments are then made in the formula to take account of: the proportion of properties with common facilities, the proportion of medium and high rise flats, the level of violent crime, the level of re-lets and terminations, deprivation (where the authority ranks in the top 100 on at least one of six measures of deprivation) and an area cost adjustment. The allowances paid are currently subject to transitional protection

(to ensure each authority receives at least its previous year's allowance). An additional amount per dwelling is paid to enhance energy performance.

27. The phase one research included a number of comparisons of costs with allowances with the local housing authorities sorted into various groupings, for example by location and by size. Three findings in particular have been noted as they appear to have a line of consistency running through them:
  - For London Boroughs, expenditure exceeds allowances by more than other areas.
  - Councils with large and extra large housing stocks (as defined in the Phase one report) and London Boroughs (many of which would fit in one or other of these size categories) have expenditure that exceeds allowances by a greater proportion than other stock sizes.
  - The recovery of costs associated with leasehold flats is an issue. The review of management and maintenance costs undertaken in phase one observed that *“There is some correlation between total net costs and number of leaseholders although this may simply be a coincidence between higher costs in London in particular. There does appear to be some correlation between net costs over allowances and the proportion of leaseholders”*.
28. It was considered that there is a logical correlation that can be drawn from these findings, in that the region with the most significant over spend against allowances reflects those authorities that also have a higher than average proportion of medium and high rise flats and leasehold properties. Furthermore, councils with larger stock holdings in other areas of the country may not have the same issue with leaseholders as in London, but they are likely to be cities and large towns and their stocks are likely to include a higher proportion of medium and high rise flats. Consequently we have attempted to reflect the additional costs of managing a portfolio of properties that includes medium and high rise flats in revisions to the management allowance formula.
29. The “pot” for medium-rise and high-rise flats has been increased (without reducing the pot for houses and low rise dwellings), thereby allocating increased resources towards authorities with a greater proportion of medium and high rise flats.

### ***Maintenance allowance***

30. The current maintenance allowance formula includes separate calculations for response repairs, planned works, re-lets and terminations and crime work related to voids, as follows:
  - The allowance for response repairs is based on an amount per dwelling for each archetype multiplied by the number of dwellings in each archetype. This is then adjusted for a crime factor and for the proportion of medium and high rise flats.

- The allowance for planned works is based on per dwelling amounts for each archetype multiplied by the number of dwellings in each archetype.
  - The allowance for re-lets and terminations is based on per dwelling amounts for each archetype multiplied by the number of dwellings in each archetype. The total is then multiplied by the re-let and termination percentage for the authority.
  - The allowance for crime work related to voids is based upon a fixed amount multiplied by the crime factor and the percentage of rental income lost due to void dwellings.
31. The total maintenance allowance for the four elements above is then adjusted by a measure of local building costs, a national scaling factor and transitional protection (to ensure the local authority receives at least its previous years allowance).
  32. Further to the findings drawn out from phase one and the adjustment made to the calculation of the management allowance, a second alteration has been made to the maintenance element of the management and maintenance allowances to increase the multiplier that is applied to the number of medium-rise and high-rise flats in the response repairs element of the maintenance allowance.
  33. This change again serves to increase the pot for medium-rise and high-rise flats for responsive repairs (without reducing the pot available for the stock types), thereby allocating increased resources towards authorities with a greater proportion of medium-rise and high-rise flats.

***Management and maintenance allowance increases***

34. The changes to the management and maintenance allowance formulae described above deliver greater increases in allowances for London authorities and for other councils with larger stock numbers (which tend to have a more mixed portfolio of dwellings). In overall terms, the changes increase the total national management allowances above the 2011-12 allowances, by slightly below 9 per cent, the maintenance allowances by a little under 4 per cent and the combined allowance for management and maintenance by 5.73 per cent, all of which is in keeping with the overall findings of phase one review.
35. The percentage increases in management and maintenance allowances per dwelling, compared to the subsidy allowances calculated before transitional protection for 2011-12, arising from the two changes described above, range between 0.0 per cent and 13.5 per cent for individual authorities. In cash terms the increases range from £0 to £376 per dwelling. The 18 local authorities with the greatest percentage increases are all in Greater London. The increase in management and maintenance allowances arising from these changes is taken into the starting assumptions in the self-financing model.

### ***Major repairs allowance***

36. The current formula used for the calculation of major repairs allowances subsidy is based upon an major repairs allowances per dwelling for each archetype multiplied by the number of dwellings in that archetype. The major repairs allowance per dwelling is based on the previous year's amount uplifted by the GDP deflator. This unadjusted major repairs allowances for each local authority is then multiplied by a regional cost factor (incorporating the BCIS factor for local building costs and a national geographical adjustment factor which dampens the effect of the BCIS factor so that the total national major repairs allowances is the same as the national unadjusted major repairs allowances).

### ***Phase one revision of the major repairs allowances***

37. The phase one work sought to recognise elements in the major repairs allowances that had not previously been included in the costs, including lifts and common parts. The allowances for houses (as distinct from flats) also increased significantly and the reasons behind this were set out in the report.
38. The major repairs allowances costs for newly arising need were based upon a national profile of replacement for each element over 30 years (on the assumption that the backlog is dealt with separately). The total major repairs allowances costs for each archetype were then derived based upon an assumed profile of replacement in five year bands and the unit price of each element multiplied by the proportion of dwellings within the archetype that are deemed to have the particular element. The total cost per archetype was then divided by the total stock in each archetype and divided by five years to give an annual major repairs allowance for each five year band by archetype.
39. A single annual major repairs allowance per dwelling per archetype was then calculated in the phase one research. This annual major repairs allowance is equivalent over 30 years (in net present value terms) to the combined annual per dwelling expenditure in each of the five year bands. This annual equivalent sum can be viewed as the "revised major repairs allowances" from Phase one. (Note that the discount rate used in the major repairs allowances calculation in Phase one was 6 per cent, however it must be consistent with rate used in the main net present value model and has therefore now been revised to 6.5 per cent, as described later in this report.)
40. The profile of expenditure needs for newly arising major repairs showed a significant weighting towards the last 10 years (2032-41) due to the recent/current high level of major repairs activity funded through the Decent Homes programme.
41. The research in Phase one concluded that nationally the average "revised major repairs allowances" (at 6 per cent annual discount rate) for tackling newly arising need weighted across all archetypes was approximately £825 per dwelling which was 24 per cent higher than the national average major repairs allowances in 2008-09. The £825 per dwelling per year comprises £734 for ongoing maintenance and replacements of all elements that comprise the

Decent Homes Standard as well as £91 for lifts and common parts, the latter of which was not previously included in major repairs allowances. For individual archetypes, the revised major repairs allowances produced in Phase one differed considerably in some cases from the amounts assumed in the current subsidy allowances, and in particular the allowance for houses increased significantly.

### ***Major repairs allowances for individual local authorities in phase one***

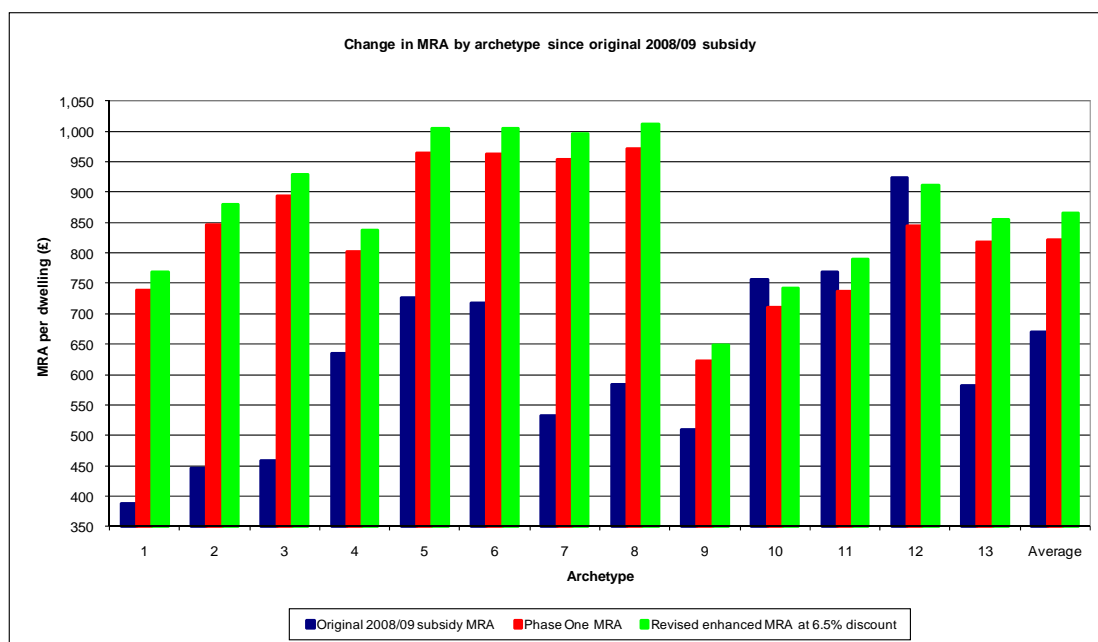
42. The research undertaken by BRE calculated an average “revised major repairs allowance” for each local authority by multiplying the “revised major repairs allowance” for each archetype by the number of dwellings of each archetype held by the authority, adding the sums together and dividing by the total stock holding. The outcome of the calculation was then subject to a slight regional cost adjustment (similar to that in the current housing subsidy major repairs allowances calculation).

### ***Building on major repairs allowances the work from Phase one***

43. After deriving the average major repairs allowances per dwelling for each archetype and each five year band, the phase one report made an assumption that only 95 per cent of this amount would be required on the basis that 5 per cent of the newly arising need in any one year is not dealt with. However, it was considered that it was difficult to justify this approach, as over time all works will need to be completed, and so the major repairs allowances per dwelling for each archetype has been increased to reflect the costs of 100 per cent of the work identified.
44. The use of 100 per cent of the costs has had the effect of increasing the annualised major repairs allowances per dwelling over 30 years for all archetypes. Applying the updated dwelling numbers in the latest subsidy determination and a 6.5 per cent annual discount rate (to be consistent with the discount rate in the overall model) gives an annual figure of £864.60 per dwelling.
45. The figure below shows the effect of the changes described above, starting with the original major repairs allowances per archetype in the 2008-09 housing revenue account subsidy calculation, as this was the year on which calculations from Phase one were based. The figure clearly shows that the findings of the phase one work significantly increased the major repairs allowances for archetypes one to nine, as well as 13 (all of which are low rise houses or bungalows). The phase one work reduced the major repairs allowances for archetypes 10 to 12 (low rise, medium rise and high rise flats).
46. The figure illustrates that the changes made to major repairs allowances in phase two have the effect of increasing the major repairs allowances for all archetypes (due to the assumption that 100 per cent of the work required is carried out), and in particular increasing the major repairs allowances for archetypes 11 and 12 to a level more comparable with the 2008-09 subsidy.



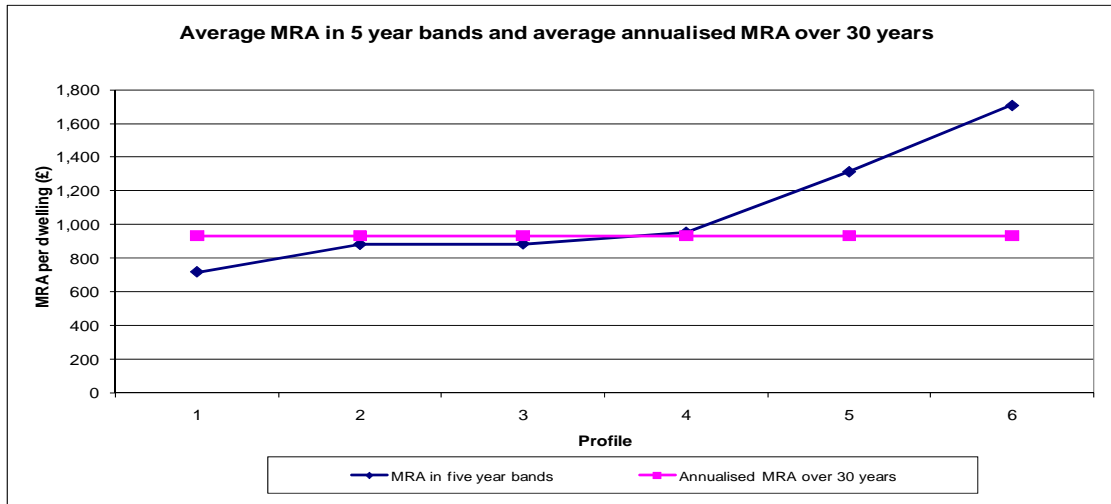
**Figure 1: Changes to major repairs allowances since the 2008-09 housing revenue account subsidy allowance**



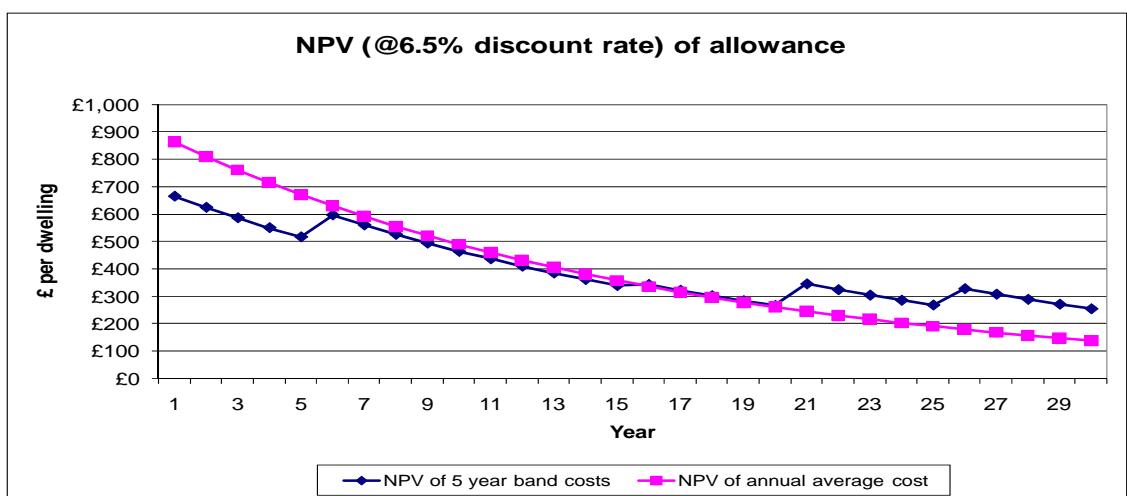
47. The revised enhanced major repairs allowance for each archetype shown in the figure above is the annualised cost over 30 years. As mentioned above, the major repairs allowances per archetype was then multiplied by the number of homes in that archetype held by each local authority to produce the total major repairs allowances for the authority. Dividing this by the total stock at each local authority produces an average annualised major repairs allowance per dwelling for each local authority. Regional cost factors (which take into account the BCIS uplift from the 2011-12 subsidy determination plus a geographical adjustment factor that dampens the BCIS uplift across all authorities to maintain the same overall total) were then applied to the authorities' average major repairs allowances in the phase one work. This approach has continued for the phase two work (to follow the same principle as the current subsidy calculation).
48. The costs in the calculation of the revised major repairs allowances in phase one of the project were in a 2008-09 price base. For phase two the costs have been uplifted for each authority by their increase in major repairs allowance between 2008-09 and 2011-12 so as to produce the revised annualised major repairs allowances per dwelling for 2011-12 for each local authority. This figure is then compared to the 2011-12 major repairs allowance in the subsidy determination to establish the uplift to be applied for each council.
49. As mentioned earlier in the report, the phase one work produced a profile of required major repairs allowances investment in five year bands. Figure 2 below shows a comparison of the annual expenditure in five year bands with the annualised major repairs allowances per dwelling. Figure 3 shows the net present value of the revised average annualised major repairs allowance per dwelling compared to the net present value of the major repairs allowance profiled in five year bands. These figures indicate that local authorities will

receive a revised major repairs allowance that is in excess of the estimated spending requirement in the first ten years, but in later years expenditure will exceed the annualised major repairs allowance. Therefore local authorities will need to ensure that surplus resources in the early years are made available later on. Figure 4 illustrates the cumulative net present value over thirty years is the same for both the annualised and profiled spend (at a net present value of £12,000 for both).

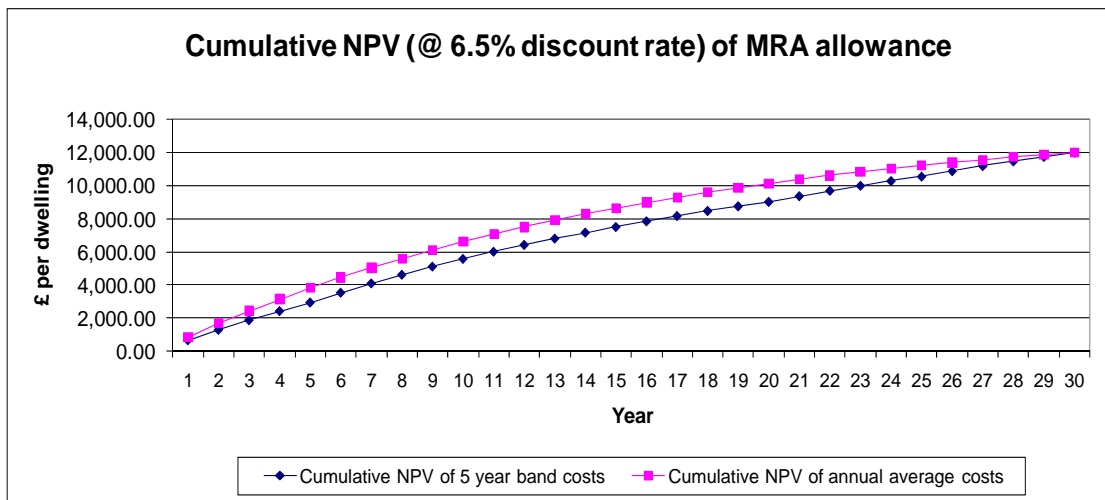
**Figure 2: Expenditure per year in 5-year bands and annualised per year equivalent**



**Figure 3: Net present value of the annual major repairs allowance compared to the profile of major repairs allowance spend in five year bands**



**Figure 4: Cumulative net present value of the annual major repairs allowance compared to the profile of major repairs allowance spend in five year bands**



### ***Major repairs allowance increases***

50. The percentage increases in major repairs allowance for each council that result from these calculations range between 7.6 per cent and 52.1 per cent, and the average increase is 28.9 per cent, resulting in an average major repairs allowance of £934 per dwelling at a 2011-12 price base. The percentage increase above the 2011-12 major repairs allowances for each authority is then taken into the self-financing model.

### ***Disabled facilities allowances***

51. A total national disabled facilities allowance to be allocated across all local authorities has been included in the calculation. The total quantum of allowance will be allocated to each local authority on a pro rata basis, depending on their stock numbers, but adjusted with the Regional Cost Factor from the housing subsidy determination. (This is the same adjustment factor which drives the major repairs allowances adjustment.) This adjustment will not materially alter the total quantum of disabled facilities allowance – it merely reallocates the allowance between the local authorities based on their relative Regional Cost Factors.

### ***Combined allowance increases***

52. For the purposes of inclusion in the debt calculation it is accepted that the total increase in management and maintenance and major repairs allowances taken together is of more significance to councils than the increases in the individual allowances. The combined increases range from 5.8 per cent to 16.6 per cent of the 2011-12 allowances. In terms of cash per dwelling, the increases range from £143 to £503. Including the provision for disabled facilities allowance brings the combined increases range from 8 per cent to almost 20 per cent.

### ***Backlog***

53. Proposals for funding the Decent Homes backlog have recently been published by the Homes and Communities Agency and are available from their website.

### ***Private finance initiative allowances***

54. Housing revenue account private finance initiative subsidy will be paid separately and has not been included in the net present value calculation. Homes that are in private finance initiative projects at the date of implementation are excluded from the major repairs calculation (as is the case in the present subsidy calculation). The homes become included in the calculation after the private finance initiative project (lease) is scheduled to end.

### ***Other reckonable expenditure and historic premia***

55. Through the current housing revenue account subsidy system, some authorities receive a subsidy for "other reckonable expenditure". The main type of expenditure covered by this is rent paid for eligible leasehold property. We understand that no leasehold arrangements entered into since 1990 have been eligible for subsidy, so the amount of subsidy has been gradually reducing since then.
56. On a national basis, other reckonable expenditure in 2010-11 totalled £8.6m and in the draft 2011-12 determination this has reduced to £6.4m. In view of the amount of other reckonable expenditure in 2010-11 and the fact that it is a reducing year on year, it is not particularly significant in terms of impact on the national picture.
57. Where DCLG currently meets historic premia in the current subsidy system these have been included in the self-financing valuation. They are included for 10 years, reducing at 15 per cent per year. Other reckonable expenditure reduce at 10 per cent per year over 30 years.

## 2 Cash flow assumptions

### **Principal net present value cash flow assumptions**

#### ***Discount rate***

58. The main reference points for the discount rate are:

- The Green Book – this recommends a discount rate based purely on the social time preference of 3.5 per cent real. The recommended approach is to take account of optimism bias and systematic risk in the underlying financial forecasts and to discount the resulting cash flows at 3.5 per cent. Previously a rate of 6 per cent real had been used, reflecting a combination of social time preference as well as optimism bias and systematic risk.
- Housing transfer valuations – the discount rate recommended by the department for housing transfer valuations is 6 per cent to 8 per cent real, though the expectation in recent years has been that a rate closer to 6 per cent should be used. The discount rate used in housing transfer valuations has reflected additional compensation for risk and uncertainty.

59. In view of the approach taken in calculating the allowances for the debt calculation, it is suggested that a discount rate typical of that used for housing transfer valuations (6.5 per cent) is appropriate. Such a real rate recognises that the actual costs incurred by an authority in managing, maintaining and repairing properties may not necessarily be fully reflected in the complex allowances used in the net present value calculation, due to specific peculiarities that may exist and unforeseen costs that may arise. Local authorities will also be required to address a number of risks within their future business plan, including:

- Management, maintenance and major works costs for their housing, including any future statutory or regulatory changes, such as fire safety standards, disabled adaptations, environmental investment and any other new or additional services.
- The certainty of receiving future rental income increasing at a rate above inflation for the next 30 years.
- Future cost increases above inflation caused by factors outside their control. For example increases in employers national insurance or increased pension contributions caused by external economic factors.

#### ***Income and cost rises relative to inflation***

60. Formula Rents are assumed to rise at 0.5 per cent above Retail Prices Index. Additionally the 'base case' includes an assumption that Guideline Rents will converge with Formula Rents in four years (based on the first rent increase being in 2012-13), i.e. converge in 2015-16 with both increasing at 0.5 per cent above Retail Prices Index inflation thereafter.

61. Management, maintenance and major repairs allowances costs are assumed to rise in line with the GDP deflator (as this is what they are linked to in the subsidy calculation). HM Treasury states that *“The GDP deflator is a much broader price index than the CPI, RPI or RPIX (which only measure consumer prices) as it reflects the prices of all domestically produced goods and services in the economy. Hence, the GDP deflator also includes the prices of investment goods, government services and exports, and subtracts the price of UK imports. The wider coverage of the GDP deflator makes it more appropriate for deflating public expenditure series.”*
62. Although rents and costs are linked to different price indices, long-term trends suggest that it is reasonable to assume that the two measures will compare closely in the longer term, though there is some evidence that in the shorter term Retail Prices Index may be above the GDP deflator.
63. At present both management and maintenance allowances are subject to a small “rebasings percentage” linked to the rent convergence policy. This has not been included in the model/projections. In the 2011-12 subsidy determination the rebasing percentage was zero.

#### **Debt management expenses**

64. In response to comments received following the publication of the prospectus in March 2010, an allowance for debt management costs has now been included in the valuation. The calculation is in keeping with the methodology used in the subsidy determination, that is, that the allowance comprises a fixed element plus a variable element that is based upon the level of debt. (In the 2011-2012 subsidy determination the base allowance is £39,457 and the variable element is 0.04760 per cent. These have been increased by inflation (assumed at 2.2 per cent) to an estimated 2012-13 level of £40,325 and 0.04865 per cent, respectively.
65. It may be appreciated that, with part of the allowance being dependent on the allocated date, a circular calculation is created with the debt management costs being determined only after debt allocation has been made, but then with the former driving the latter. A simple macro has therefore been written to overcome this – this is a simple copy and paste macro which takes the computed debt allocation values based on the opening debt and fixes them. The debt management allowance is calculated based on the opening debt and the same sum is allowed in every year. The total of the debt management allowances for all councils is used in the National Debt Total calculation.

#### **Indicative business plan cash flow assumptions**

66. The indicative business plan cash flows take the rent and cost figures from the net present value calculation and apply annual inflation assumptions. The costs of borrowing (interest and debt management) are included. In the indicative business plan cash flows the debt management cost allowance for each year is based on the opening debt for that year.

67. The initial debt is set at the level produced by the net present value calculation.

### 3 Key outputs from the modelling

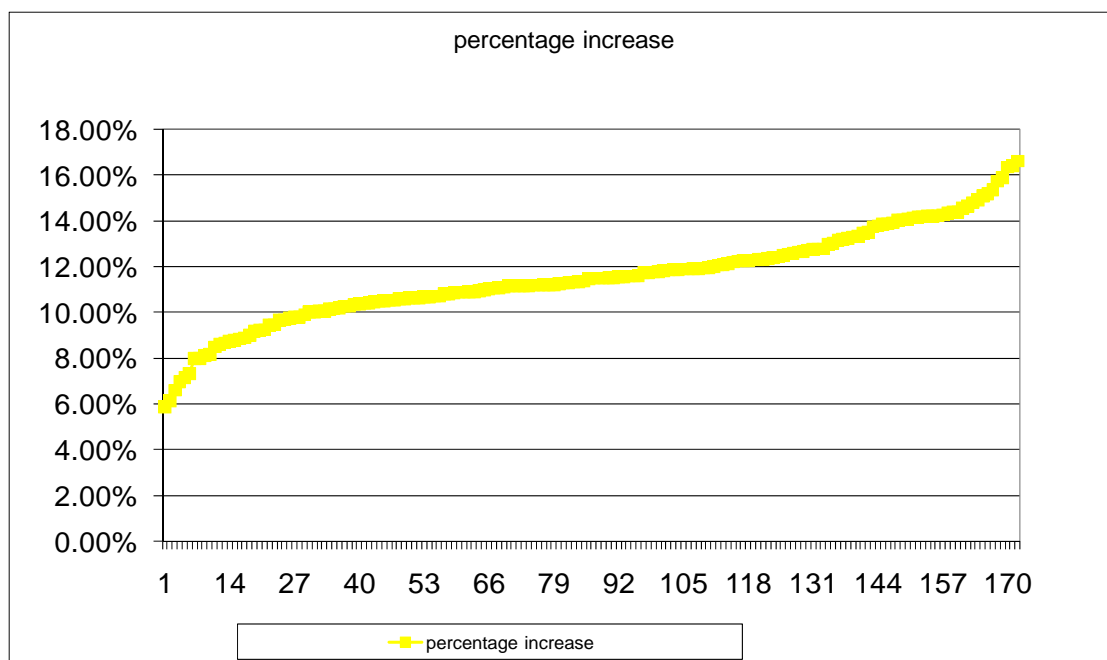
#### *Key questions*

68. There are likely to be three key questions for councils:
- How much additional housing resource will this council receive?
  - How much debt is to be allocated in total on a national basis?
  - How much debt will be allocated to this council?

#### *Additional resources*

69. We have outlined the additional management and maintenance and major repairs allowances that have been built into the debt allocation (net present value) calculation in the relevant sections of this report. In terms of the combined management and maintenance and major repairs allowances, the proposed revised sums represent an increase of between 5.8 per cent and 16.6 per cent on the allowances calculated in the 2011-12 subsidy determination. In cash terms, this represents between £143 and £503 per dwelling. Nationally these increases represent additional annual funding of over £535m when compared to the 2011-12 subsidy determination.
70. The following figure shows the distribution of the percentage increases amongst local authorities.

**Figure 5: Combined allowance percentage increase by local authority**

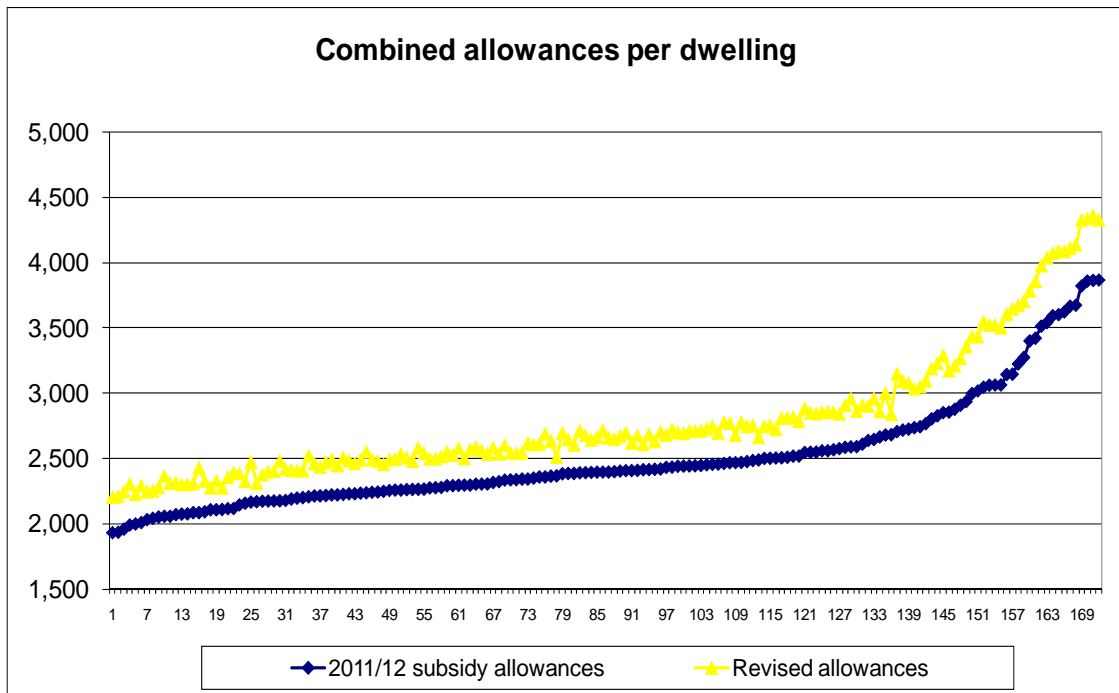


71. The following figure shows the combined allowances per dwelling arranged in ascending order of the 2011-12 subsidy allowances determination. It shows



that the distribution of the revised allowances is consistent with the current subsidy distribution.

**Figure 6: Subsidy and revised allowances per dwelling by local authority**



**National debt allocation**

- 72. In the 2011-12 housing subsidy determination, the subsidy capital financing requirement of all councils that have been included in the self-financing assessment totals £21.044bn.
- 73. A simple national net present value calculation of the level of debt to be allocated (as at the start of financial year 2012-13) would include the projections of the assumed rent income (98 per cent of guideline rents less rent limitation allowances) less the management and maintenance and major repairs allowances in line with the assumptions set out previously. The following table shows the calculation of the net present value of the projected net income stream over 30 years at a 6.5 per cent annual discount rate.

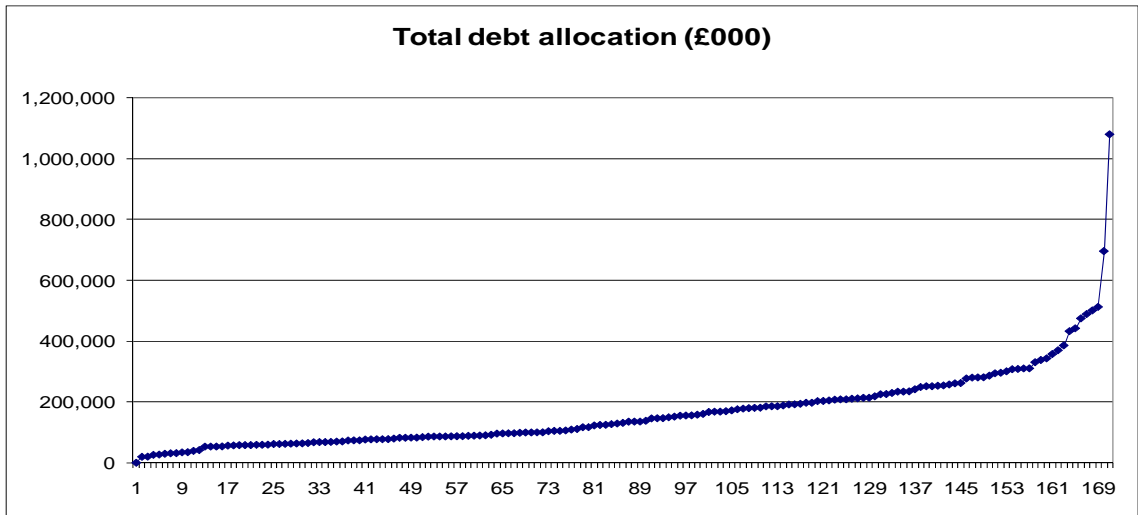
Scenario	Valuation
Base (rents less revised management and maintenance and major repairs allowances)	£28.42bn
The current level of debt assumed is:	
2011/12 subsidy capital financing requirement	£21.04bn

- 74. The net present value of the scenario exceeds the 2012-13 start of year estimated subsidy capital financing requirement by £7.38bn.

### Allocation of debt to councils

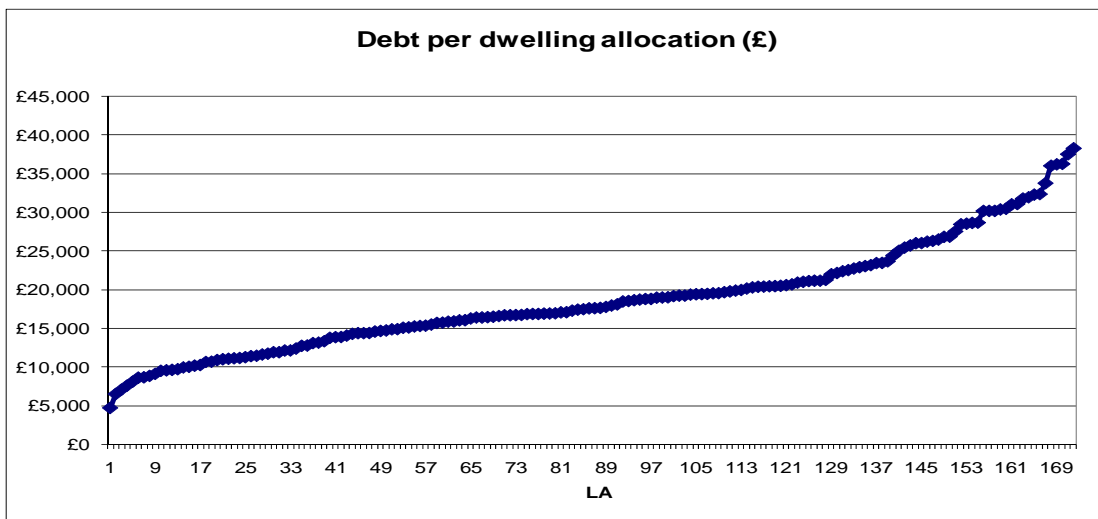
75. Taking the base case valuation of net rents less management and maintenance and major repairs allowances, the allocation of debt to councils (i.e. the opening level of debt under self-financing) is shown in Figure 7.

Figure 7: Debt allocation by local authority



76. The main determinant of the level of debt in the above figure is the number of dwellings owned by a local authority. Figure 8 shows the base case debt per dwelling.

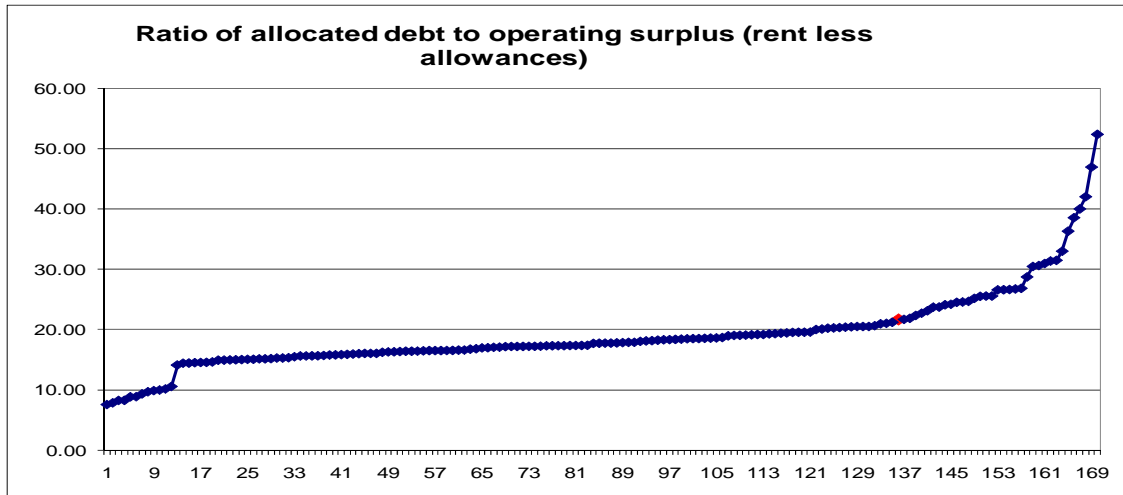
Figure 8: Debt per dwelling by local authority



77. The debt per dwelling shows a range from under £5,000 to a little over £38,000. This can be further understood if we consider the debt allocation per dwelling divided by the “simple” annual operating surplus per dwelling

(calculated using the 2010-11 guideline rent less management and maintenance and major repairs allowances allowances), as shown in the following figure.

**Figure 9: Debt allocation by simple operating surplus**

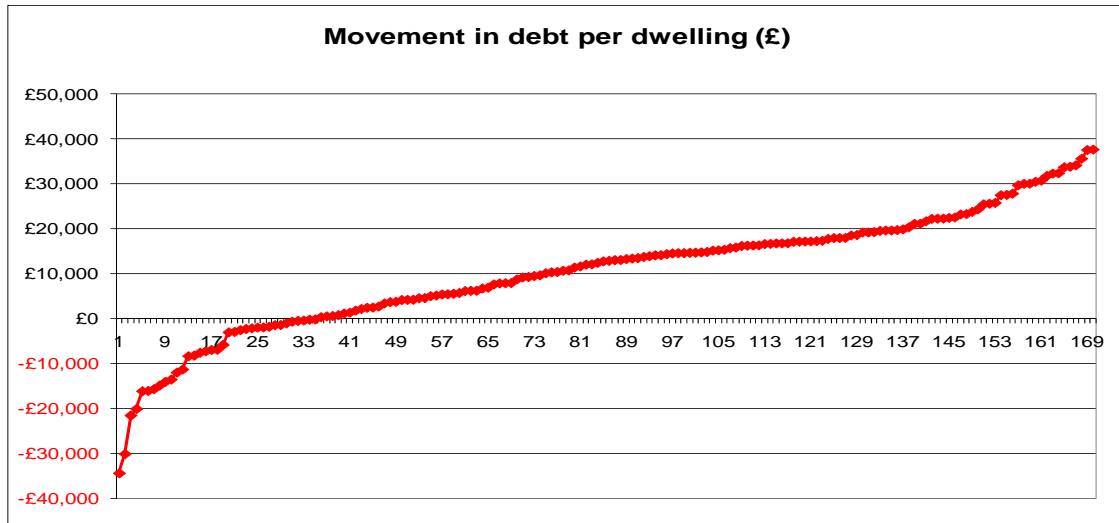


78. This figure largely shows a narrow distribution with most councils' debt per dwelling being between 14 and 26 times the simple operating surplus in the first year. There are some significant variances beyond this and five councils have a ratio of debt to simple operating surplus of above 50. A feature of the calculation for many of these councils with a high ratio is that they are amongst the lowest with regard to the simple operating surplus, that is, the guideline rent in year 1 is only slightly above the level of the allowances. It is this factor, rather than the level of debt, that appears to have the greater influence.

***Changes in housing debt***

79. It is proposed that councils will be allocated an increase or decrease on their existing debt to move them to the debt allocated through the net present value calculation. It should be noted that the existing debt will be taken as the subsidy capital financing requirement. Figure 9 shows the decrease/increase in debt per dwelling for each council based on the base case.

**Figure 10: Movement in debt per dwelling from existing subsidy capital financing requirement**



80. The previous figure might suggest that significantly more debt is allocated to councils than is removed from others however this is a largely false impression as many of the councils with larger stock holdings are amongst those with reducing debt per dwelling.

## Main conclusions

81. The calculations are based on the assumption that self-financing is introduced in April 2012 and calculates the net present value of the net income for 30 years. There is the facility within the model to adjust the start date.
82. The main outcomes from the modelling compare an estimate of the debt which can be supported at a national and council level with the anticipated existing housing debts at the end of the 2011-12 financial year.
83. The total allocated debt (net present value) arising from the calculation is £28.42bn (£28,418m). This is £7.38bn higher than the estimated current housing debt, as represented by the subsidy capital financing requirement
84. The cost assumptions used in the net present value calculation represent an average increase in management and maintenance allowances of 5.7 per cent and in major repair allowances of 28.9 per cent.
85. Additional major investment beyond that funded by major repairs allowances are subject to further discussions/distribution processes.

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