



Making Britain
a great place
to grow old

gold age Pensioners

Valuing the socio-economic
contribution of older people in the UK

Appendix I: Economic model

March 2011



Contents

Introduction	2
Exchequer contributions and costs	4
Non-Exchequer contributions.....	14
Key findings and conclusions	21
Annex A: Value of Anticipated Exchequer Revenues and Costs (2007 prices).....	A-1
Annex B: Value of Anticipated non-Exchequer Benefits (2007 prices).....	B-1
Annex C: Time and Value of Time older people devote to different types of volunteering activities	C-1



Introduction

Purpose of the research

- 1.1 The objective of the research reported in this paper is to analyse and quantify as far as possible the main sources of financial costs and contributions associated with Britain's current and expected future population of over 65s.
- 1.2 The research considers a 20 year period covering 2010 to 2030 and in effect provides a cash flow of future expected Exchequer costs and contributions, as well as expected future non-Exchequer contributions associated with the wider contribution of Britain's population of over 65s. The base year for the model is 2010.
- 1.3 In line with the requirements of HM Treasury's Green Book¹, costs and contributions are presented in constant prices (the expected effect of future inflation is excluded from the model). The cash flow forecasts are presented in 2007 prices, as for some important datasets the most up-to-date data available is from 2007/08. Where data was not available for some or all of 2008-2010, trends in the available datasets for the preceding five years were used to pull out the most recently available data to the common base year (2010).
- 1.4 The model also provides a net present valuation of the expected net contribution of the over 65s over the next two decades (i.e. from 2011 to 2030). In undertaking this aspect of the analysis, cash flows in future years have been discounted by 3.5% per annum in line with the guidance provided in the Green Book.

Demographic assumptions

- 1.5 One of the key drivers in the model is the expectation that the country's population will continue to age over the next two decades. This expectation is reflected in future population projections developed by the Office for National Statistics (ONS) and the Department for Communities and Local Government (CLG), as the following table illustrates:

Table 1.1: Proportion of the UK's population accounted for by older age groups

	2008	2031
65-69	4.5%	6.7%
70-74	3.9%	5.6%
75-79	3.2%	4.5%

¹ HM Treasury (2003) *The Green Book*, 7th edition
The figures reported in the report are derived from our economic model. Figures provided in Annex A and Annex B are drawn from that model but in the report are rounded to make the reporting more readable and also to reflect the level of accuracy implicit in the underlying source data



	2008	2031
Continued...		
80-84	2.4%	4.2%
85-89	1.5%	2.7%
90-94	0.5%	1.5%
95-99	0.1%	0.5%

Source: CLG Population Projections

Sources of Information

- 1.6 A wider variety of financial, economic and demographic datasets have been used in the model, although ONS and other official statistics have been utilised wherever possible.
- 1.7 Where specific assumptions have been made regarding anticipated changes in key variables, evidence bases are identified in the text and/or referenced in footnotes.
- 1.8 The majority of the datasets have been modelled for three population age groupings, as follows:
 - 65-69
 - 70-74
 - 75+
- 1.9 In some cases however, data is grouped for the two age groupings:
 - 65-74
 - 75+
- 1.10 In these cases we have used the data that is available.

Structure of the report

- 1.11 The remainder of the report is structured in the following way:
 - **Chapter 2** - sets out the assumptions and findings around the Exchequer contributions and costs associated with Britain's current and expected future population of over 65s
 - **Chapter 3** - sets out the assumptions and findings with respect to the non-Exchequer contributions associated with Britain's current and expected future population of over 65s
 - **Chapter 4** - provides a brief summary and conclusions



Exchequer contributions and costs

Introduction

This chapter considers the Exchequer-related contributions and costs associated with the national population of over 65s.

2.1 In terms of contributions, the categories that have been considered include expected future tax receipts collected directly or indirectly by Her Majesty's Revenue and Customs (HMRC) that originate from the over 65s (as well as other age groupings). The categories are as follows:

- income tax and national insurance contributions²
- capital gains tax
- inheritance tax on the estates of the over 65s
- VAT and excise duties
- licences

2.2 In addition, we have estimated payment of council tax by the over 65 population.

2.3 In terms of **costs**, we have focused our analysis on three key categories, as follows:

- basic state pension payments³
- age-related welfare payments
- the proportion of the national healthcare bill that is estimated to be associated with providing services to older people

2.4 The summary findings from the modelling for each category of benefit and cost are set out under the relevant headings overleaf. The reporting of findings is presented as a snapshot for 2010 (the base year) and an equivalent snapshot for 2030, the final year in the cash flow model.

2.5 The overall results for each year considered in the analysis are presented in a cash flow table appended to this report (Annex A).

² In this report we focus on taxes that are expected to be paid by older people in the remaining period of their lifetimes. We have not attempted to calculate the lifetime value of taxes paid (or, for that matter, the value of public services received) by older people prior to 2010.

³ All references to pensions in this report refer to the basic state pension unless otherwise stated.



Earnings-related taxes

Income tax

2.6 HMRC provide data on the number of income taxpayers by age group and the aggregate amount of income tax paid by those taxpayers. At the time of writing, the most up-to-date published data is for the 2007-08 tax year. In terms of the remit for this research, the key aspects of this data are presented below:

Table 2.1: Income tax paid by older age groups, 2007-08

Age range	No. taxpayers ('000s)	Average tax paid (£)	Total tax paid (£000's)
65-69	1,640	3,370	5,526,800
70-74	1,280	2,690	3,443,200
>=75	1,870	2,490	4,656,300
Total			13,626,300

Source: HMRC

2.7 That is, for the most recent tax year for which data is available, older tax payers paid a total of £13.63 billion in income tax on their earnings. The sources of income on which this tax was liable included paid employment, pension income, property income, income from stocks & shares and other investments.

2.8 The total amount of income tax paid by over 65s can be expected to increase over the next two decades for at least two reasons:

- in line with the estimates for population change presented in chapter 1, the number of over 65s paying tax will increase
- the scrapping of the Default Retirement Age (DFA) in January 2011, coupled with the impact of the Equality Act (2010), will almost certainly mean that more older people (especially in the 65-69 age group) will continue to undertake paid employment for longer and, therefore, will both earn more and pay more income tax

2.9 We have modelled expected future tax income by taking into account expected future demographic change and by making assumptions concerning the average employment rate along the 65-69 age group (which is assumed to increase to 20% by 2030) and the 70-74 age group (which is assumed to increase to 8% by 2030). We have also applied assumptions regarding trends in investment income.

2.10 The net result of our estimated future income payments by over 65s is summarised in the following table where 'snapshots' are provided for the base year 2010 and also for the future year 2030:



Table 2.2: Income tax expected to be paid in 2010 by over 65s: £ billions (2007 prices)

	2010	2030
65-69	6.08	14.53
70-74	3.67	6.46
≥75	4.95	10.28
Total ≥65s	14.70	31.27

Source: SQW

- 2.11 We expect that the total amount of income tax paid by over 65s will increase from around £14.7 billion in 2020 to around £31.3 billion by 2030.

National insurance

- 2.12 In addition to income tax, the ONS report that over 65s paid an equivalent of £704 million in national insurance contributions in 2007/08⁴. This is assumed to represent payments by over 65s still in employment who have yet to provide 30 years' worth of personal NI contributions to ensure their full entitlement to the basic state pension.
- 2.13 In modelling future years, we have assumed that this stream of payments increases in line with the expected increase in the population of the over 65s and also the expected increase in the employment rate of the 65-69s and the 70-74s. By 2030, therefore, the annual payment is assumed to have grown from £897 million per annum in 2010 to £1,002 million per annum.

Employers' national insurance

- 2.14 A final income-related source of tax revenue to consider is employers' NI contributions. Based on HMRC data, these payments are anticipated to be worth £566 million to HMRC in 2010. As a result of anticipated increases in the over 65 employment rate (due to the scrapping of the DFA), we have assumed real growth averaging 2% per annum in employers' NI contributions for each year in the appraisal. That is, by 2030 we anticipate these payments to grow to £840 million per annum.

Capital gains tax

- 2.15 HMRC do not as yet publish data on the payment of capital gains tax (CGT) by age band, although we understand that plans to publish such data are under consideration. Following dialogue with HMRC for the purposes of this research, however, we have made the following assumptions with respect to estimates for CGT payments by over 65s:

- in 2007/08 payment of CGT by over 65s is estimated to have been circa £1.5 billion

⁴ ONS (2008): *Family Spending 2008*



- the trajectory for such payments is anticipated to increase at an average of 2% per annum in real terms

2.16 We have utilised both of these assumptions in projecting anticipated aggregate payments of CGT by over 65s to approximately £2.23 billion per annum by 2030.

Inheritance tax

2.17 Inheritance tax (IHT) is levied on estates and on the assets (less deductible liabilities) of deceased persons transferred at death and on gifts made within seven years of death. HMRC publish data on inheritance tax payments on estates of deceased persons, including data that is disaggregated by the age of the deceased person.

2.18 The data indicates that in the year 2007/08, IHT to a value of £2.82 billion was paid on estates where the deceased person was aged 65 years or older at the time of their death. Looking forward, we have assumed that the potential increase in the value of IHT payments will increase, reflecting:

- the expected increase in the growth of the number of households headed by a person aged 65 or over
- an assumption that the real value of estates (that is, after taking into account the impacts of inflation) will grow at an average rate of 2% per annum over the 2010-2030 period, reflecting an expected return to an increase in net asset values including land, property, investment portfolios (i.e. stocks & shares) etc.

2.19 On this basis, we anticipate that the expected value of IHT payments by over 65s could increase from around £3.076 billion in 2010, to £6.66 billion by 2030 (also in 2007 prices).

Expenditure-related taxation

2.20 Estimates of the amounts of indirect taxation on expenditures of households where the reference person is aged 65 or over, have been developed using data from the ONS Family Spending Surveys. These spending surveys provide detailed breakdowns of spending for households by age group, including households where the reference person is aged:

- 65-74
- 75 or over.

2.21 The surveys provide estimates for expenditures broken down into 16 categories, including; food and non-alcoholic drinks, alcohol and tobacco products, clothing and footwear, utilities, transport, housing, leisure and recreation activities etc. Each of these broad categories is broken down in turn into more detailed sub-categories.



2.22 Estimates for the proportions of average expenditure likely to attract VAT and/or excise duties (the latter on petrol, alcohol, tobacco products, etc.) were first of all developed for the financial year 2007/08, using expenditure data from the 2007 Family Spending Survey and by applying average rates of VAT and excise duty to the relevant sub-categories of expenditure items. For some categories where a single tax rate could not be applied, a blended rate was used instead.

2.23 Forward projections for likely VAT and excise duty collections from future spending by over 65s were estimated by:

- using projections for the number of households expected to be headed by a reference person aged (i) 65-74 and (ii) 75 and over. The source of this data was the CLG's 2010 Household Projections estimates
- assumptions regarding the expected future increases in real incomes of households. These assumptions are driven in part by anticipated increased rates of workforce participation by over 65s, as described in the explanation of future income tax estimates earlier in this chapter

2.24 The estimates produced by this method are summarised in the table below, for two snapshot years (2010 and 2030):

Table 2.3: VAT & excise expected to be paid in 2010 and 2030 by over 65s: £ billions (2007 prices)

	2010	2030
VAT	14.95	25.68
Excise duties	1.98	3.43
Total	16.93	29.11

Source: SQW

Other taxes

2.25 Estimates for two other types of taxation were obtained from data sourced from the ONS Family Expenditure Survey. These were:

- council tax: an estimated aggregate total of £6.5 billion paid in 2007 by over 65s
- licences: an estimated £740 million paid in 2007 by over 65s

2.26 Forward estimates for each were developed using ONS household projections data for the years 2010 to 2030. The estimated increases (in 2007 prices) for each were as follows:

- council tax: an estimated aggregate total of £6.79 billion paid in 2010 by over 65s, rising to an anticipated £9.83 billion to be paid in 2030



- licences: an estimated £759 million paid in 2007 by over 65s, rising to an anticipated £1.08 billion to be paid in 2030

Summary of Exchequer contributions

2.27 The following table summarises the anticipated additional tax revenues expected to accrue from taxation of the incomes, expenditures and wealth of over 65s.

Table 2.4: Anticipated additional tax revenues

Tax revenue (£ billions), 2007 prices	2010	2030	2010-2030	% Change
Income tax	14.69	31.27	16.58	113%
Personal NI contributions	0.73	1.00	0.30	42%
Capital gains tax	1.50	2.23	0.73	49%
Licences, etc.	0.76	1.08	0.32	40%
Inheritance tax	3.08	6.66	3.59	72%
VAT	14.95	25.68	10.73	43%
Excise duty	1.98	3.43	1.44	73%
Employers' NI contributions	0.56	0.84	0.28	49%
Council tax	6.79	9.83	3.03	45%
All taxes	45.03	82.02	36.98	82%

Source: SQW

Types of Exchequer costs considered

2.28 Three types of Exchequer-related costs have been included in the analysis. These are:

- basic state pension payments
- age-related welfare payments
- the proportion of the national healthcare bill that is estimated to be age-related.

2.29 The data and assumptions used in modelling anticipated future expenditure on these items are explained below.



Basic state pension

- 2.30 The UK government anticipates spending £81.90 billion of the basic state pension in 2010/11, rising to around £85 billion in the following year⁵. In order to provide a fair comparison with the other numbers in the cash flow, these estimates have been deflated to 2007 prices in our model.
- 2.31 The model developed in our analysis focuses on the costs and contributions of over 65s resident in the UK. Therefore, the model excludes expenditure on pensioners who do not reside in the UK.
- 2.32 According to data published by the Department for Work and Pensions, around 9% of pensioners resided outside the UK in 2004, a proportion that had increased by two percentage points since 1997⁶. Although the trend towards overseas residence has generally increased over the past two decades, anecdotal evidence suggests that post-recession (and the significant depreciation of sterling), there has been a decline in this trend and that significant numbers of pensioners residing overseas are returning to the UK. It remains to be seen whether this is a temporary reversal only, or the start of a long-term trend. On this basis, we have decided to maintain the 9% 'status quo' assumption in our model.
- 2.33 Thus, 2010 expenditure on the basic state pension for UK resident pensioners is estimated to be £68.2 billion in 2007 prices.
- 2.34 Future years' expenditure on the basic state pension in our model will be influenced by a number of factors, including:
- the demographic trends (already described elsewhere in this report) that will significantly increase the numbers of people receiving the basic state pension
 - the abolition of the Default Retirement Age in 2011, meaning that more people will work for longer, deferring receipt of the basic state pension (but taking it at enhanced levels when they do so)
 - the restoration of the link between annual increases in average earnings and adjustments to the value of the basic state pension
 - the proportion of UK pensioners residing overseas
- 2.35 The net effect of these demographic, employment and emigration changes in our model suggests an expected increase in Exchequer expenditure on the basic state pension, whereby expenditure in 2030 is expected to increase to £112.9 billion (2007 prices).

⁵ HM Treasury *2010 budget forecasts*

⁶ DWP (2007): *Using Administrative Data Sources in Estimating Emigration*



Age-related welfare costs

- 2.36 Total government (local and central) expenditure on welfare payments in 2010 is estimated to amount to £105 billion⁷. In order to provide a fair comparison with the other numbers in the cash flow, this estimate has been deflated to 2007 prices in our model. On this basis, 2010 expenditure reduces to £96.4 billion in 2007 price terms. The same source estimates that welfare expenditure in 2011 and 2012 will be £109 billion and £116 billion respectively. In 2007 terms, these numbers are equivalent to £96.8 billion and £100.0 billion respectively.
- 2.37 It is estimated (by DWP) that 24% of welfare spending is currently expended on social care and other items that are related to caring or providing services for older people, in particular those with disabilities or other long term conditions or frailties.
- 2.38 However, age-related, social welfare costs will not necessarily increase proportionately with the expected increase in the population of older people. Future increases in expenditure on social care (and also on health spending, as discussed in the next sub-section) will be influenced beneficially by the expected continuation in increases in Healthy Life Expectancy (HLE) – the remaining period of one’s life in which one is expected to be in good health. As with life expectancy, HLE has continued to increase in the UK over time, reflecting higher living standards, better diets, improved medical technologies, investment in improved health services, etc.
- 2.39 According to ONS data⁸, HLE in the UK is expected to be 71.7 years at birth in 2025, compared to 69.3 years in 2005. Moreover, data from the Health Survey for England (HSE) suggests that disability-free life expectancy at age 65 is 10 years, which represents a significant improvement over past years⁹.
- 2.40 The assumption in the model is that the proportion of overall welfare spending that is associated with age-related welfare services will increase at a rate of 0.5% per annum, based on an extrapolation of observed past trends adjusted for the expected rate of demographic age-shift. Based on these assumptions, the overall proportion of the welfare bill that is accounted for by services to older people will increase from an estimated 24% in 2010 to anticipated 26.5% in 2030.
- 2.41 This, however, should be viewed in the context of an expected real terms increase in welfare spending, which is expected to increase from £96 billion in 2010 to £147 billion in 2030. Age-related welfare spending over the same timeframe is, therefore, anticipated to increase from £23.1 billion in 2010 to £39.2 billion in 2030.

Health costs that are age-related

- 2.42 A similar approach was taken to estimated future government expenditure on health services that are provided to over 65s. The OECD estimates that the UK spends

⁷ ukpublicspending.co.uk

⁸ ONS (2009): *General Household Survey*

⁹ Reported in L. Mayhew (2010), *Increasing longevity and the economic value of healthy ageing and working longer*



approximately 42% of its health budget on healthcare services for older people. According to HM Treasury estimates, anticipated public expenditure on healthcare nationally is expected to increase from £119.8 billion in 2010 to £138 billion by 2015¹⁰.

- 2.43 These estimates, however, include allowances for inflation increases. We have stripped out the effects of inflation and reverted to a 2007 price base using Bank of England inflation estimates, to enable comparison with the other income and expenditure estimates in our model. We can see UK public spending on health is expected to be broadly constant over the 2010 to 2015 period, rising from £109.6 billion in 2010 to £111.5 billion in 2015.
- 2.44 Assuming 42% of this spending is age-related, then the amount of public spending on health that is attributable to over 65s is expected to increase from £45 billion in 2010 to £47 billion in 2015.
- 2.45 Given expected increases in Healthy Life Expectancy, future increases in real terms in the amount of health spending attributable to older people can be expected to increase, but at a lower rate of increase than is expected for the over 65s population. For the purposes of the model, based on trends over the last decade, we have assumed that the proportionate increase in spending on older people will average 0.25% per annum over the appraisal period. That is, the proportionate share of spending attributable to older people is expected to increase from 42% in 2010 to 46% in 2030.
- 2.46 Based on these assumptions, real terms spending on health care services for the over 65s is expected to increase from £45.0 billion in 2010 to £64.2 billion in 2030.

Summary of Exchequer costs

- 2.47 The following table summarises the anticipated additional tax revenues expected to accrue from taxation of the incomes, expenditures and wealth of over 65s.

Table 2.5: Summary of Exchequer costs: public spending (£ billions), 2007 prices				
	2010	2030	2010-2030	% Change
Pensions	68.20	112.85	44.65	65%
Other age-related welfare	23.13	39.20	16.07	69%
Health spending (over 65s)	44.95	64.16	19.21	43%
All public spending	136.28	216.21	79.93	59%

Source: SQW/HMRC

¹⁰ ukpublicspending.co.uk



Comparison of Exchequer contributions and costs

2.48 Comparison of the results of the estimation of overall Exchequer costs and contributions suggests that:

- Exchequer contributions over the period 2010 to 2030 are expected to grow in real terms by 82% from just over £45 billion per annum in 2010 to £82 billion in 2030.
- Exchequer costs are also expected to increase from £136.3 billion in 2010 to £216.2 billion in 2030, an increase of 59%.
- Exchequer contributions as a proportion of Exchequer costs are expected to increase from 33% in 2010 to 37.9% in 2030.

2.49 Having considered the Exchequer costs and revenues in this chapter, we now turn our attention to non-Exchequer contributions in chapter 3.



Non-Exchequer contributions

Introduction

This chapter considers the non-Exchequer contributions associated with older people in the UK. The range of contributions that are considered are:

- the wider value of the expenditure undertaken by over 65s (that is, their spending power)
- social care
- volunteering
- bequests to voluntary sector organisations
- gifts and donations
- childcare
- savings for, and asset transfers to, family members

- 3.1 The assumptions that have been used in estimating and monetising the contributions are explained, set out under headings that pertain to the categories summarised above. The summary findings (results) from the modelling for each category of benefit and cost are also set out under the relevant headings. The reporting of findings is presented as a snapshot for 2010 (the base year) and an equivalent snapshot for 2030, the final year in the cash flow model.
- 3.2 The overall results for each year considered in the analysis are presented in a cash flow table appended to this report (Annex B).

Wider value of consumption expenditure

- 3.3 Since 1979, pensioners' incomes have risen about twice as fast as real earnings. Each new group of pensioners has been retiring with higher incomes compared to the last, largely due to the increasing coverage of private pensions¹¹. As people become older their propensity to be in employment decreases, so their income is often generated from other sources including income from savings and investments accumulated during their working lives.
- 3.4 Data on the spending power of older people is obtained from the annual ONS Family Spending Reports, which survey households representing different age groups including households with a reference person aged 65-74 and households with a reference person aged 75 or older.

¹¹ DWP (2006) *The Opportunity Age*



- 3.5 Aggregating average household spending across all older households (revealed by the survey) suggests that total gross expenditure by older people is worth around £81 billion to the national economy. This total excludes the proportion of 'expenditure' which is earmarked for savings. This aspect is covered later in this section.
- 3.6 An element of the £81 billion spending is, however, accounted for by indirect taxation, namely the estimates for Exchequer receipts via VAT and excise duty that were discussed in the previous chapter.
- 3.7 The net value of older people's consumption expenditure (that is, taking into account the 'leakages' of taxation on purchases) is estimated to be worth £64.63 billion to the national economy in 2010.
- 3.8 Forward estimates for the growth of this expenditure have been developed based on assumptions including:
- using projections for the numbers of households expected to be headed by a reference person aged (i) 65-74 and (ii) 75 and over. The source for this data was the CLG's 2010 Household Projections estimates
 - assumptions regarding the expected future increases in real incomes of households. These assumptions are driven in part by anticipated increased rates of workforce participation by over 65s, as was described in the explanation of future income tax estimates earlier in this chapter
- 3.9 This first-round expenditure will also provide wider economic benefits for the economy through the workings of the income multiplier effect. That is, the spending of older people will benefit the economy more widely as their spending becomes turnover for the businesses (and/or the income for other households) that benefit directly from their spending. This turnover/income will then be re-spent in the economy through business procurement effects and the subsequent spending of incomes earned by employees of those businesses. The effect then ripples through the economy as money is spent and re-spent. The value of the multiplier effects will vary according to the type and location of the spending and after several rounds it will dissipate due to the cumulative effect of leakages such as taxation, savings and expenditure on imported items.
- 3.10 It is difficult to estimate the size of the multiplier effect with certainty, but a conservative estimate would be 15-20% of the initial injection of net consumption expenditure¹². On this basis, for 2010 it would likely lie in the range of £10 billion to £13 billion for the UK economy. For the purpose of our model we have taken a mid-point range of 17.5%, which we consider is likely to be a cautious estimate.
- 3.11 It should also be noted that a proportion of multiplier-induced expenditure will be captured by government as revenue via VAT and excise duties. We have not attempted to estimate the value of this contribution.

¹² Based on the guide values suggested in the HCA Additionality Guide (2008)



3.12 The estimates produced by this method are summarised in the table below, for two snapshot years (2010 and 2030), both based on 2007 prices:

Table 3.1: Future household spending by over 65s: £ billions (2007 prices)

	2010	2030
First round spending	64.63	108.32
Multiplier effects	11.31	18.96
Total	75.94	127.28

Source: SQW/ONS

3.13 Thus, over the period 2010-2030 the value of first -round household expenditure (net of indirect taxation and savings) made by older households is expected to grow from £64.6 billion to £108.3 billion. The value of the multiplier effect is expected to grow from £11.31 billion in 2010 to £18.96 billion in 2030 (both in 2007 prices).

Social care

3.14 Data from the 2001 Census indicates that people over the age of 65 accounted for around one third of carers who provide more than 50 hours of care per week¹³. The economic value of social care provided by older people is considerable. Research published by Carers UK in 2007 (undertaken by the University of Leeds) estimated that the overall economic value of informal carers in the UK was worth around £87 billion per year¹⁴. Around one third of this value is attributable to people over 65, meaning that the value of this contribution was likely to have been in the order of £30 billion in 2007.

3.15 The method used here to value this contribution was as follows. First, data was obtained from the 2001 Census on the breakdown of social care provided by older people. The data is as follows:

Table 3.2: Proportions of older people providing social care

Number of hours	65-74	75-84	≥85
1-19 hours	8%	5%	2%
20-49 hours	2%	2%	1%
≥50 hours	5%	4%	2%

Source: 2001 Census

3.16 Averages were calculated for the number of hours contributed to care across the three age groups in the table. The next step was to apply a shadow price to the hours worked in order to reflect both the opportunity cost of the provision of care from the perspective of the carer and the substitution benefit for the public sector in having that care provided. The hourly rate that was used was £16.81 per hour. This

¹³ Office for National Statistics, 2001 Census

¹⁴ Carers UK (2007) Valuing Carers – calculating the value of unpaid care



represents an updating of an hourly rate of £14.50 per hour that was used in the Carers UK report referred to earlier, which was based on 2005 data.

- 3.17 The final step was to estimate future numbers of over 65 carers, based on anticipated demographic trends and CLG projections for population and households.
- 3.18 The result of this analysis was the estimation that older carers in the UK delivered contributions worth £34.2 billion in 2010 (in 2007 prices) and that this contribution is expected to rise in value to £51.7 billion by 2030.

Volunteering

- 3.19 Previous research has highlighted the disproportionate contribution that older people make in providing voluntary effort. Research¹⁵ undertaken by VITA/Volunteering England in 2006, for example, found that people over 65 formed 31% of the volunteer workforce of 477 voluntary sector organisations surveyed and that they contributed a similar proportion of the total number of hours provided by volunteers to those organisations.
- 3.20 For the purposes of this report, primary research was commissioned by WRVS to estimate both the amount of volunteering effort contributed by over 65s and the types of volunteering activities that were being undertaken. The survey involved 2,100 people, including a boosted sample of 500 people aged over 65. The research covered both:
- formal volunteering – volunteering that is done on behalf of voluntary sector and community-based organisations
 - informal volunteering – voluntary effort expended on behalf of friends or neighbours and that is provided on a bilateral basis (that is, not involving any third-party organisations).
- 3.21 The research identified:
- an annual average of 104.6 hours of informal volunteering effort per person aged over 65
 - an annual average of 54.5 hours of formal volunteering effort per person aged over 65
- 3.22 These estimates take into account both the total numbers of hours devoted to a range of informal and formal volunteering activities, as well as the varying propensities of people to undertake those activities, including the propensity for some older people to do *no* volunteering.
- 3.23 Details of the types and quantities of volunteering activities identified in the survey are provided in an annex to this report (Annex C).

¹⁵ VITA/Volunteering England (2006), *The Indispensable Backbone of Voluntary Action*



- 3.24 The next step was to estimate a shadow price for the value of the volunteering activities undertaken. The normal convention of valuing volunteer time is to apply a market price for the labour services in question, that is, to estimate the price that would normally be paid if a non-voluntary sector organisation was procuring equivalent services. In this case, the range of services could be grouped into three types:
- basic services (such as cleaning, gardening, dog-walking etc.). For services of this type the hourly national minimum wage was applied
 - mid-range services (such as administration, tutoring etc.) where a shadow price of £15 per hour was applied
 - higher value services (such as organising events, attending committees, mentoring) where a shadow price of £25 per hour was applied
- 3.25 The net result of this approach was to produce the following estimates for the annual value of volunteering effort per older person:
- informal volunteering: £703.13 per person
 - formal volunteering: £730.99 per person
- 3.26 The final step was to aggregate these values for older age groups. The average values were applied to the population of older people aged 65-79 only. This is not to deny that people aged 80 or more do volunteering, but given expectation of HLE it must be assumed that the propensity (and ability) to volunteer will, on average, diminish with advanced age.
- 3.27 Looking forward, the average propensities to volunteer were assumed to remain constant, reflecting the fact that while HLE is expected to continue to increase, the employment rate among over 65s is also expected to increase (implying that less time is available for volunteering among people who stay in work longer). The overall quantum of effort, however, will grow in line with expected demographic changes.
- 3.28 The overall result from this analysis was to produce an estimated value for the volunteering contribution made by older people:
- for 2010 this contribution was estimated to be worth £10.59 billion
 - by 2030 this contribution is expected to grow to £14.53 billion

Gifts and donations to non-family members

- 3.29 Apart from donations of time, older people also make financial donations to voluntary and third-sector organisations. According to data from the ONS Family Spending survey, donations made by older people were worth around £3 billion in 2007. By extrapolating to 2010, the value of these contributions are estimated to be worth



some £3.28 billion in 2010. By 2030, these contributions could be worth some £4.78 billion.

Bequests to charities

- 3.30 Data from HMRC was obtained on the value of bequests made to charities. The data regarding propensities to make such bequests dates back to the 2001. Data on trends in the value of estates is available for the period 2001-2007.
- 3.31 Through extrapolation, we estimate that the value of bequests to charities in 2010 was worth £3.57 billion. By applying assumptions about demographic trends and trends in the value of estates, we anticipate that the value of such bequests could increase to £5.39 billion in 2030.

Childcare

- 3.32 Older people can make a range of contributions to childcare. They provide ad hoc support and care for grandchildren on the occasions that the children's parents are unavailable, or they can provide more regular, structured care, such as looking after children on a daily basis when the parents are at work. The ONS *Focus on Older People* report (2005) reported that 60% of grandparents looked after grandchildren when they were younger than 15. The report also quotes Age UK research which found that one in four grandparents care for their grandchildren on a regular basis.
- 3.33 The economic benefits to families from these contributions can be very valuable, allowing parents to return to work earlier and/or to work longer hours than would otherwise be possible or affordable.
- 3.34 Evidence from Grandparents UK (2009) estimates that the annual value of childcare provided by grandparents was worth £3.9 billion. On the basis that 70% of grandparents are aged 65 or over, and in deflating the Grandparents UK estimate to 2007 prices, then extrapolating using demographic projections, we estimate that:
- older people provide childcare worth £2.73 billion in 2010 (2007 prices)
 - older people could be providing childcare worth £4.47 billion per annum by 2030 (2007 prices).

Financial transfers to grandchildren and other family members

- 3.35 There is some evidence that suggests that older people make significant contributions by transferring financial assets to family members at key stages of life. Examples include gifts to the parents of grandchildren to help with school fees and direct gifts to grandchildren or other young people to help with university fees, the purchase of a car or a contribution towards the deposit for the purchase of a first home.



3.36 According to HMRC data, over 65s save over £300 million each year in Child Trust Funds. In addition, Safe Home Income Plans (SHIP), the trade body for financial institutions that provide regulated equity release schemes in the UK, estimates that the value of the equity release market managed by its members in the UK in 2008/09 was around £950 million, which accounted for 84% of the UK market as a whole.¹⁶ Meanwhile, research cited by Saga suggests that approximately 20% of equity released through such schemes is used for the purpose of making gifts to family members, with an average value of £27,000.¹⁷

3.37 Drawing from this evidence base we project that:

- savings for grandchildren through approved mechanisms such as Child Trust Funds were worth a minimum of £329 million in 2010¹⁸ (2007 prices). Via replacement products such as Junior ISAs, this contribution is expected to be worth around £594 million per annum by 2030 (2007 prices)
- asset transfers to family members are estimated to be worth a minimum of £190 million per annum in 2010 (2007 prices) and this contribution is projected to grow to around £343 million per annum by 2030 (2007 prices).

Summary of non-Exchequer contributions

3.38 The following table summarises the anticipated additional tax revenues expected to accrue from taxation of the incomes, expenditures and wealth of over 65s:

Table 3.3: Summary of non-Exchequer contributions (£ billions), 2007 prices

	2010	2030	2010-2030	% Change
Consumption expenditure	75.94	127.28	51.34	68%
Social care	34.22	51.68	17.46	51%
Volunteering	10.59	14.53	3.94	37%
Gifts and donations to charities, etc.	3.28	4.76	1.46	45%
Bequests to charities	3.57	5.39	1.82	51%
Childcare	2.73	4.47	1.74	64%
Savings for grandchildren	0.33	0.59	0.26	81%
Asset transfers	0.19	0.34	0.15	81%
All benefit streams	130.85	209.04	78.17	60%

Source:SQW

¹⁶ Facing the Future: redefining equity release to meet today's social and economic challenges; SHIP, July 2009

¹⁷ saga.co.uk/money-and-finance/retirement-solutions/equity-release/press-releases/greater-comfort.aspx
This is likely to be an underestimate as it excludes contributions into National Savings and other products



- 3.39 As indicated by the numbers in the table, the overall wider contributions of older people are considerable. In 2010 they are estimated to be worth (in 2007 prices) nearly £131 billion, of which nearly £76 billion (58%) is accounted for by consumption expenditure, £34 billion (26%) which older people make in providing social care and over £10.5 billion (8%) in volunteering contributions.
- 3.40 By 2030, the scale of the non-Exchequer contributions is expected to grow considerably, rising to an expected £209 billion, representing growth of over £78 billion (a 60% increase).

Key findings and conclusions

- 3.41 The research undertaken for this report has indicated that older people contribute very significantly to the national economy, both through their contributions to national and local tax revenues and through their wider economic contributions as a result of their spending power, their formal and informal volunteering and through the provision of non-market traded services to their extended families, neighbours and communities.
- 3.42 Of course, older people also receive valuable services and support from the state, including the basic state pension (to which they have themselves contributed via accumulated national insurance contributions during their working lives), other welfare payments and services and health services.
- 3.43 A key finding of this research, however, is that the overall value of the contribution made by older people significantly exceeds the costs to the state of providing these services to them.
- 3.44 The table below summarises the overall impact of the three principal strands that have been considered in this report:

Table 4.4: Summary of costs and contributions (£ billions), 2007 prices

	2010	2030	2010-2030	% Change
Exchequer revenues	45.03	82.02	36.98	82%
Non-Exchequer contributions	130.85	209.05	78.19	60%
Sub-total	175.88	291.07	115.17	65%
Exchequer costs	136.29	216.21	79.92	59%
Total	39.59	74.86	35.25	89%

Source: SQW

- 3.45 It can be seen that the total net contribution of older people in 2010 is estimated to be worth nearly £40 billion and that by 2030 the overall value of the net contribution is anticipated to grow to nearly £75 billion, an increase of 89%.



3.46 The cumulative value of the expected net contribution of older people over the 2010-2030 period is estimated to be worth £1.261 trillion. In line with the guidance contained in the Green Book, however, we have discounted the expected future flows of net contributions at 3.5% per annum. On that basis, the discounted value of future economic contributions of older people is estimated to be worth £879 billion over the 2010-2030 period.



Annex A: Value of anticipated Exchequer revenues and costs (2007 prices)

£'000s	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Income tax	14,695	15,319	16,271	17,122	17,858	18,550	19,208	19,723	20,259	20,862	21,480	22,167	22,865	23,669	24,538	25,485	26,540	27,648	28,812	30,024	31,270
Personal NI contributions	704	719	734	749	763	778	793	808	823	838	853	868	883	898	913	928	943	958	972	987	1,002
Capital gains tax	1,500	1,530	1,561	1,592	1,624	1,656	1,689	1,723	1,757	1,793	1,828	1,865	1,902	1,940	1,979	2,019	2,059	2,100	2,142	2,185	2,229
Licenses, etc.	759	775	791	807	823	839	855	871	887	903	919	935	951	967	983	999	1,015	1,031	1,047	1,063	1,079
Inheritance tax	3,077	3,210	3,347	3,489	3,635	3,785	3,940	4,100	4,264	4,433	4,608	4,787	4,972	5,163	5,359	5,561	5,768	5,982	6,202	6,429	6,662
VAT	14,953	15,415	15,884	16,360	16,843	17,333	17,831	18,337	18,850	19,372	19,901	20,439	20,985	21,540	22,104	22,677	23,258	23,849	24,450	25,060	25,680
Excise duty	1,986	2,048	2,111	2,175	2,239	2,305	2,372	2,440	2,509	2,579	2,650	2,722	2,796	2,871	2,947	3,024	3,103	3,183	3,264	3,347	3,431
Sub-total national taxes	37,673	39,061	40,791	42,437	43,984	45,505	47,009	48,389	49,808	51,314	52,854	54,484	56,146	57,936	59,813	61,791	63,901	66,089	68,357	70,700	73,104
Employers' NI	566	577	589	601	613	625	637	650	663	676	690	704	718	732	747	762	777	792	808	824	841
Council tax	6,795	6,946	7,098	7,249	7,401	7,552	7,704	7,855	8,007	8,159	8,310	8,462	8,613	8,765	8,916	9,068	9,219	9,371	9,522	9,674	9,825
Total	45,034	46,539	48,385	50,142	51,798	53,424	55,029	56,507	58,019	59,614	61,239	62,949	64,686	66,545	68,485	70,521	72,682	74,914	77,221	79,593	82,020
Pensions	68,205	69,548	71,942	74,123	75,977	77,698	79,292	80,864	82,487	84,202	85,898	87,739	89,788	92,071	94,455	96,974	99,784	102,782	106,004	109,376	112,851
Aged-related welfare	23,127	23,359	24,256	23,667	24,380	25,114	25,871	26,650	27,453	28,280	29,132	30,010	30,914	31,845	32,804	33,793	34,811	35,859	36,940	38,052	39,199
Health (age-related)	44,954	44,860	44,963	45,210	46,163	47,134	48,124	49,133	50,162	51,210	52,279	53,368	54,478	55,609	56,763	57,938	59,135	60,356	61,600	62,867	64,159
Total costs	136,286	137,767	141,160	143,000	146,520	149,946	153,287	156,647	160,103	163,692	167,309	171,117	175,180	179,526	184,022	188,705	193,730	198,997	204,543	210,295	216,208
Net Exchequer costs	91,252	91,228	92,776	92,858	94,722	96,522	98,257	100,141	102,083	104,078	106,069	108,167	110,495	112,981	115,537	118,184	121,048	124,083	127,323	130,702	134,188



Annex B: Value of anticipated non-Exchequer contributions (2007 prices)

£'000s	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Wider value of consumption spending & multipliers	75,944	78,622	83,624	87,607	90,545	93,069	95,387	96,319	97,016	98,035	99,062	100,450	100,917	102,338	104,487	107,253	110,779	114,606	118,672	122,899	127,279
Gifts and donations (excluding family members)	3,279	3,353	3,427	3,501	3,575	3,648	3,722	3,796	3,870	3,944	4,017	4,091	4,165	4,239	4,313	4,386	4,460	4,534	4,608	4,682	4,755
Bequests to voluntary organisations, etc.	3,571	3,642	3,765	3,873	3,962	4,043	4,116	4,187	4,259	4,333	4,405	4,482	4,565	4,656	4,748	4,844	4,947	5,054	5,166	5,280	5,393
Asset transfers to family members	190	196	202	208	214	220	227	234	241	248	255	263	271	279	287	296	305	314	323	333	343
Savings for grandchildren (CTFs etc)	329	339	349	360	370	381	393	405	417	429	442	455	469	483	498	513	528	544	560	577	594
Volunteering	10,594	10,789	11,204	11,561	11,838	12,059	12,234	12,385	12,530	12,680	12,825	13,018	13,208	13,373	13,529	13,694	13,886	13,941	14,074	14,286	14,535
Routine childcare (grandchildren, etc.)	2,730	2,798	2,868	2,940	3,013	3,089	3,166	3,245	3,326	3,409	3,495	3,582	3,672	3,763	3,857	3,954	4,053	4,154	4,258	4,364	4,473
Social care	34,219	34,893	36,071	37,109	37,965	38,739	39,442	40,120	40,807	41,518	42,207	42,941	43,740	44,610	45,496	46,409	47,400	48,428	49,501	50,590	51,677
Total	130,857	134,632	141,509	147,157	151,482	155,250	158,687	160,691	162,465	164,596	166,709	169,282	171,006	173,741	177,216	181,348	186,358	191,576	197,162	203,010	209,050



Annex C: Time and value of time older people devote to different types of volunteering activities

Informal volunteering (older people)	Average annual hours per month	Overall propensity	Annual hours	Shadow price (£/hour)	Annual average value
Go shopping for an elderly friend/neighbour/relative	4.3	27.3%	14.07	5.93	83.45
Go shopping with an elderly friend/neighbour/relative	3.8	19.6%	8.96	5.93	53.13
Collecting prescriptions	1.42	19.6%	3.35	5.93	19.85
Cleaning	3.05	10.3%	3.76	5.93	22.28
Gardening	3.47	12.6%	5.25	5.93	31.14
Practical household tasks	3.59	31.7%	13.64	5.93	80.91
Giving a lift (transporting)	3.66	30.2%	13.27	5.93	78.67
Helping someone attend a social activity	3.17	17.6%	6.69	5.93	39.69
Dog walking	5.38	7.0%	4.54	5.93	26.94
Advice/tutoring/mentoring/advocacy	3.37	22.6%	9.13	15.00	136.97
Befriending	4.27	42.8%	21.94	5.93	130.10
Total	39.48		104.61	6.75	703.13
Formal volunteering (older people)	Average annual hours per month	Overall propensity	Annual hours	Shadow price (£/hour)	Annual average value
Fundraising	3.33	10.0%	3.98	15.00	59.76
Organising events	5.63	6.7%	4.56	25.00	113.92
Attending committees	4.01	11.7%	5.64	25.00	141.11
Mentoring	4.34	5.0%	2.60	25.00	64.91
Providing education	3.36	4.7%	1.89	25.00	47.30
Administration	6.03	8.8%	6.37	15.00	95.49
Visiting elderly/disabled neighbours	5.13	15.2%	9.39	5.93	55.67
Transporting	3.7	11.1%	4.95	5.93	29.34
Befriending	4.21	17.6%	8.89	5.93	52.71
Practical help	2.39	8.5%	2.44	5.93	14.46



Informal volunteering (older people)	Average annual hours per month	Overall propensity	Annual hours	Shadow price (£/hour)	Annual average value
Continued...					
Campaigning	4.2	5.3%	2.66	15.00	39.91
Coaching	7.77	1.2%	1.09	15.00	16.41
Total	54.1		54.46	15.31	730.99



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WRVS,
Beck Court,
Cardiff Gate Business Park,
Cardiff CF23 8RP

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