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# **Pension Credit Estimates of Take-Up in 2004/2005**

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# Introduction

## Background

This publication contains information on the take-up of Pension Credit in Great Britain for its first full financial year 2004/2005. Pension Credit was launched in October 2003; the half-year figures for 2003/2004 are re-presented in this publication alongside new full-year figures. The last edition covered take-up for 2003/2004 and was published in January 2006<sup>1</sup>.

In the past, results for pensioners for Income Support (IS), Minimum Income Guarantee (MIG) and Pension Credit (PC) have been published as chapters of the main income-related benefits annual report. However, due to improvements in timeliness, and a wish for Pension Credit results to be published in a more timely manner, we now publish these results as a set of stand-alone statistics, the contents of which will be repeated in a separate chapter in "Income Related Benefits Estimates of Take-up in 2004/2005".

Take-up is measured in two ways: by expenditure and by caseload. Caseload take-up compares the number of benefit recipients - averaged over the year - with the number who would be receiving if everyone took up their entitlement for the full period of their entitlement. Expenditure take-up compares the total amount of benefit received, in the course of a year, with the total amount that would be received if everyone took up their entitlement for the full period of their entitlement.

Take-up estimates are presented as ranges within which it can be assumed true take-up lies. These 'ranges of true take-up' account for possible biases inherent in estimates from data that are less than perfect. These ranges also account for the effects of sampling variation (otherwise known as sampling error).

Where sample sizes and data sources allow, take-up statistics are broken down to enable comparisons by family type. In practice, we can provide analysis by family type for Pension Credit, as the DWP Pension Credit administrative data records the gender and partner status of claimants. Consequently, we can produce take-up ranges for pensioner couples, single male pensioners and single female pensioners.

Care should be taken when interpreting take-up statistics. In particular, an upper limit of, say, 90% to the caseload take-up range does not necessarily mean that at least 10% never take up their entitlement. This is because some of the shortfall in take-up may represent a delay in claiming benefit that is eventually received. Further information is presented on the characteristics of those non-recipients of Pension Credit who are apparently entitled and some of the reasons for non-take-up are explored. These results help to explain some aspects of the figures.

Changes in caseload take-up since 2003/2004 are also explored in this edition. The reader should be wary of interpreting changes over time. Year-to-year changes in the ranges do not necessarily indicate that the level of true take-up has changed, since the range in one year usually overlaps with the range in the next. In addition, while the half-year data for 2003/2004 have been annualised to allow comparisons with the full-year data for 2004/2005, any comparisons should still be treated with caution, given that the 2003/2004 data is based on only half a year's sample of the Family Resources Survey (FRS). Guidance on the interpretation of differences between 2003/2004 and 2004/2005 has been included in the text that accompanies the results.

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<sup>1</sup> *Income Related Benefits Estimates of Take-Up in 2003/2004*, (2006) DWP

## **National Statistics Quality Review**

In the summer of 2003, DWP launched a National Statistics Quality Review of statistics on the take-up of income-related benefits, aimed at establishing whether the report continues to meet the needs of users. It considered user needs along with priorities for the development of the series. The conclusions of the review will be published in 2006.

## **Contact Points**

If you have any comments or questions regarding this report please contact us at the following e-mail address: [irb.takeup@dwp.gsi.gov.uk](mailto:irb.takeup@dwp.gsi.gov.uk)

If you wish to speak to someone then please contact Carly Gray, by telephone on 020 7962 8222.

## **Online Access**

This report is also available on the internet at: <http://www.dwp.gov.uk/asd/irb.asp>

## **Structure of the report**

This publication is divided into three main parts.

Chapter 1 provides full results covering caseload and expenditure take-up of Pension Credit. It begins with a brief description of the benefit, a guide to the tables presented and important technical considerations. The tabulated results plus commentary is followed by an analysis of the characteristics of those entitled to but not receiving Pension Credit.

Chapter 2 provides an overview of the methodology and the data sources used.

The Appendix describes in more detail how the ranges of true take-up have been calculated in this publication.

As with previous take-up of income related benefits publications, estimates of take-up only cover people in private households, since the Family Resources Survey (FRS) includes only those people residing in private households. In practice this means these take-up estimates omit people living in Residential Care or Nursing Homes and some other, mostly small, groups.

## A quick guide to the published tables

There are two basic types of table presented in this publication – one that contains statistics related to the caseload measure of take-up and a second that contains statistics related to the expenditure measure. The following illustrations are intended as a guide to interpreting the tables.

### Illustration 1: Understanding tables presenting caseload take-up statistics

Shows the number of recipients of Pension Credit (in private households) based on DWP administrative sources.

Refer across columns to compare statistics for different family groupings.

Example: An average of one million and forty-nine thousand benefit units in the family group 'single female pensioners' were receiving Pension Credit in 2004/2005.

**Caseload Take-up of Pension Credit**

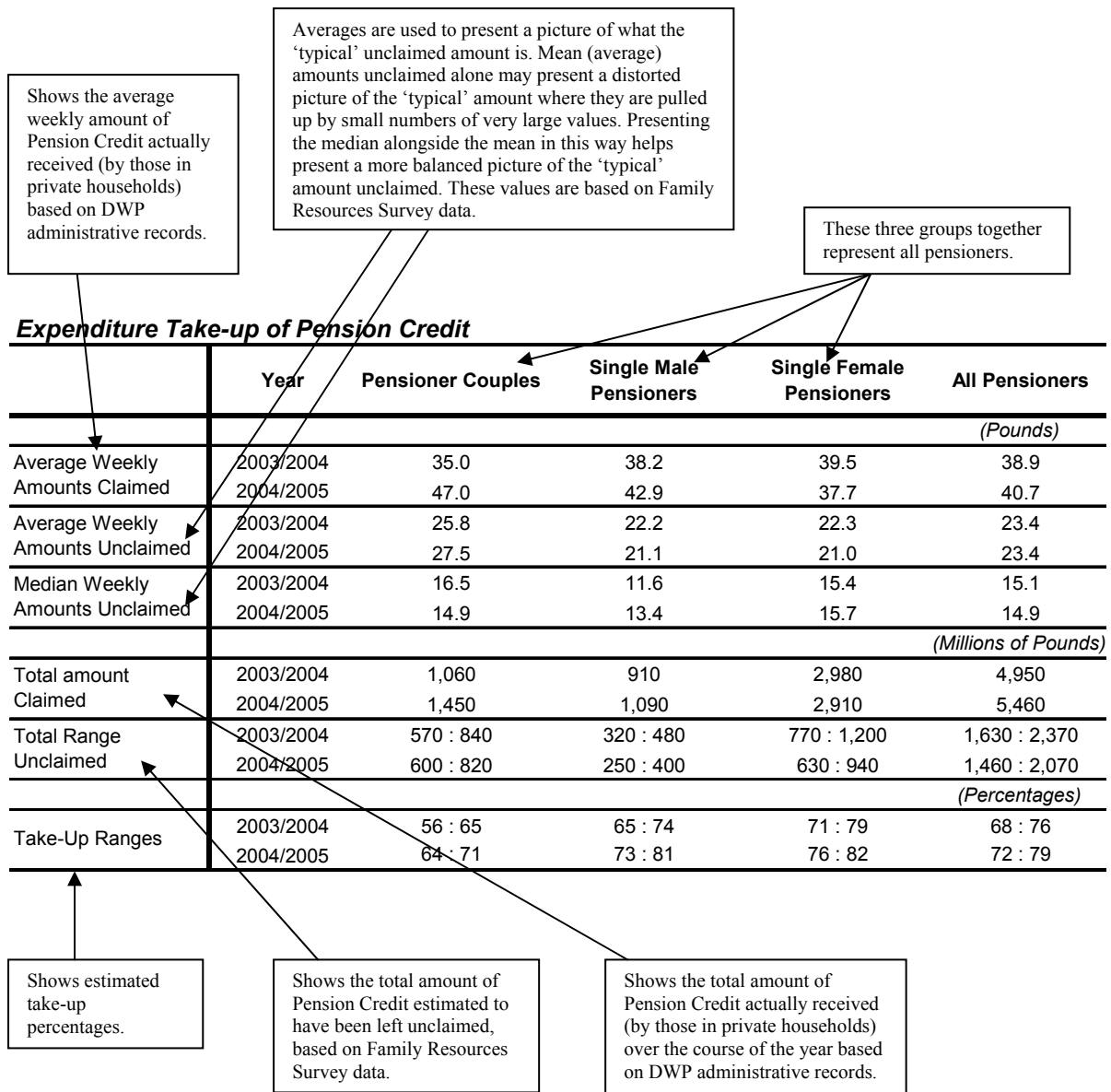
	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					(Thousands)
Number of Recipients	2003/2004	580	460	1,450	2,490
	2004/2005	600	490	1,490	2,570
Range of Entitled Non-Recipients	2003/2004	380 : 550	240 : 370	610 : 960	1,260 : 1,840
	2004/2005	380 : 530	200 : 320	540 : 810	1,140 : 1,630
					(Percentages)
Take-up Ranges	2003/2004	51 : 61	56 : 66	60 : 70	58 : 66
	2004/2005	53 : 61	60 : 71	65 : 73	61 : 69

Shows estimated take-up percentages.

Shows the number of people who are estimated to be not claiming Pension Credit they are entitled to based on Family Resources Survey data.

Example: In 2004/2005 between two hundred thousand and three hundred and twenty thousand 'single male pensioners' were not claiming the Pension Credit to which they were entitled. This is equivalent to take-up of between 60% and 71%.

**Illustration 2: Understanding tables presenting expenditure take-up statistics**



## Glossary of Terms

### Average

In this publication average is used interchangeably with the word **mean**.

### Backdated Pension Credit claim

This is a claim whereby payment is received as a lump sum which covers the period up to 12 months prior to when the pensioner made the claim, providing they were eligible. For example, a pensioner making a claim on 5 October 2004 could receive payment for the period back to 6 October 2003, provided they were eligible for that period.

### Benefit Unit

This is a single adult or a couple, together with any dependent children (as defined under “Child”). A pensioner living in the same household as his or her independent child, for example, is a separate benefit unit from the child and would be assessed separately for Pension Credit.

### Child

An individual under the age of 16 or an unmarried 16 – 18 year old on a course up to and including ‘A’ level standard (up to and including ‘Highers’ in Scotland).

### Confidence Interval

A measure of **sampling error**. A 95% confidence interval for an estimate is the range that will – if sampling error is the only source of error – contain the ‘true’ figure on average 95 times out of 100. Note that in practice there are also other sources of error in the survey and analysis processes.

### Couple

A man and woman living together as husband and wife, including cohabittees.

### Entitled

A benefit unit is said to be entitled to receive a benefit if they satisfy the qualifying conditions for that benefit.

### Entitled Non-Recipient (ENR)

A benefit unit that is entitled to a benefit but is not receiving it.

### Entitlement

Entitlement is the amount of money an entitled benefit unit should receive in benefit.

### Grossing Up

The sample of FRS respondents is grossed up to represent the whole household population. Different grossing factors are applied to different types of households in order to correct for over- and under- representation of these household types in the FRS.

### LA Tenant

This category includes people who rent their accommodation from the Local Authority or Council, and the house does not come with a job.

### Median

The median unclaimed amount is the value that divides the population of entitled non-recipients, when ranked by their modelled entitlements, into two equal-sized groups. In other words, the median is the exact middle point where half the entitled non-recipients have larger unclaimed amounts and half have smaller.

### **Modelled as Entitled/modelling entitlement**

An assessment of entitlement to Pension Credit is made for each benefit unit on the Family Resources Survey. On the basis of this assessment, benefit units are then classified as Entitled Non-Recipients (ENRs), Entitled Recipients (ERs), Non-Entitled Non-Recipients (NENRs), or Non-Entitled Recipients (NERs). Those benefit units classified as Entitled Non-Recipients and Entitled Recipients have been “modelled as entitled”.

- **Over-modelled**

Modelled entitlement for a benefit unit is greater than the amount of Pension Credit they report receiving in response to the Family Resources Survey.

- **Under-modelled**

Modelled entitlement for a benefit unit is less than the amount of Pension Credit they report receiving in response to the Family Resources Survey.

### **Owner Occupier**

This category includes those people who own their housing outright or own with a mortgage, including those people who part rent and part own their accommodation.

### **Pensioner**

Pensioners are either single people aged at least 60 or, if a couple, both will be termed pensioners if one is aged at least 60 years old. This definition ties in with qualification conditions for Pension Credit.

### **Private Renter**

The private renter’s category used here includes people renting accommodation from Registered Social Landlords.

### **Recipient**

A benefit unit that is in receipt of a benefit.

### **Sampling Error**

The uncertainty in an estimate arising from taking a **random sample** of the population which may not reflect the characteristics of the whole population. The likely size of this error can be identified and expressed as a confidence interval.

## Symbols and Abbreviations

<b>2004/2005</b>	Financial Year	<b>DWP</b>	Department for Work and Pensions
<b>FRS</b>	Family Resources Survey	<b>DSS</b>	Department of Social Security
<b>BU</b>	Benefit unit	<b>ONS</b>	Office for National Statistics
<b>ENR</b>	Entitled Non-Recipient	<b>LA</b>	Local Authority
<b>ER</b>	Entitled Recipient	<b>QSE</b>	Quarterly Statistical Enquiry
<b>NER</b>	Non-Entitled Recipient	<b>WPLS</b>	Work and Pensions Longitudinal Study
<b>NENR</b>	Non-Entitled Non-Recipient	<b>RP</b>	Retirement Pension
<b>R</b>	Recipient	<b>WFP</b>	Winter Fuel Payment
<b>MIG</b>	Minimum Income Guarantee	<b>AHC</b>	After Housing Costs
<b>PC</b>	Pension Credit	<b>BHC</b>	Before Housing Costs
<b>GC</b>	Guarantee Credit element of Pension Credit	<b>..</b>	Not available
<b>SC</b>	Savings Credit element of Pension Credit	<b>.</b>	Not applicable/Not possible
<b>AA</b>	Attendance Allowance	<b>-</b>	Nil or negligible
<b>DLA</b>	Disability Living Allowance	<b>&lt;</b>	Less than

## Conventions Used in the Tables

1. Average amounts are rounded to the nearest 10 pence.
2. Amounts claimed and unclaimed are rounded to the nearest £10 million.
3. Caseload figures are rounded to the nearest 10,000.
4. Take-up percentages are rounded to the nearest percentage point.
5. Totals may not equal the sum of their parts due to rounding.
6. Full-time self-employed cases are excluded from all results.
7. Those not living in private households are excluded from all results.



# Summary of Key Results for Pension Credit in 2004/2005

## **Pension Credit (PC)**

Take-up between 61% and 69% by caseload

Take-up between 72% and 79% by expenditure

## **Guarantee Credit element of PC (GC only)**

Take-up between 70% and 81% by caseload

Take-up between 74% and 83% by expenditure

## **Guarantee and Savings Credit elements of PC (both GC and SC)**

Take-up between 70% and 81% by caseload

Take-up between 74% and 85% by expenditure

## **Savings Credit element of PC (SC only)**

Take-up between 43% and 50% by caseload

Take-up between 47% and 54% by expenditure



## Pension Credit

Pension Credit (PC) was introduced on 6 October 2003 and replaced the Minimum Income Guarantee (MIG). It is paid to people aged 60 and over who are living on low incomes and guarantees all pensioners an income above a certain level.

There are two parts to Pension Credit: the Guarantee Credit (GC) and the Savings Credit (SC). The Guarantee Credit ensures a guaranteed level of income by providing financial help for people aged 60 and over whose income is below a given threshold. The Savings Credit is an extra amount for people aged 65 or over who have made modest provision for their retirement above the level of the basic state pension (such as savings or a second pension). Entitlement to the Guarantee Credit and the Savings Credit are calculated separately, and as a result, pensioners can receive both or either elements of Pension Credit.

Capital below £6,000 is ignored in the calculation of entitlement. There is no upper limit to the amount of capital a person may have, but any amount over £6,000 may affect the amount of Pension Credit received (except those in Residential Care or Nursing Homes for whom there is a limit of £10,000 – these cases are excluded from the analysis). An income of £1 per week is assumed for every £500, or part of £500, where capital exceeds £6,000.

In April 2004 the level of Pension Credit was increased by a rate greater than the increase in the basic state Retirement Pension. The statistics that follow have been interpreted with this context in mind.

Men over 60 but under 65 could claim either Pension Credit or Jobseeker's Allowance (Income-Based). For those who had an underlying entitlement to both of these benefits we cannot determine which one they might have claimed. In practice we know that the vast majority of these cases would have claimed Pension Credit; so, for the purposes of estimating take-up we have made the assumption that men over 60 but under 65 would have claimed PC rather than Jobseeker's Allowance if they have reported receipt of neither. Pension Credit could be paid in conjunction with Housing Benefit and Council Tax Benefit but not with Jobseeker's Allowance.

### Guide to tables

Estimates of caseload and expenditure take-up are presented for Pension Credit as a whole in Tables 1.1 and 1.2, by pensioner family type. Estimates of take-up for the components of Pension Credit are presented in the following tables: Tables 1.3 and 1.4 for the Guarantee element only; Tables 1.5 and 1.6 for both the Guarantee and Savings Credit; and Tables 1.7 and 1.8 for only the Savings Credit. Though the table-by-table presentation of estimates are mutually exclusive, readers will notice that some components do not always sum to totals either within tables or to the overall Pension Credit results shown in Tables 1.1 and 1.2. This is because 95% confidence intervals have been calculated separately for components and totals in order to reflect sampling error. Take-up statistics are presented as ranges that reflect the maximum plausible upward and downward effects of bias on the baseline figures<sup>2</sup>. Where ranges are wide, uncertainties as to biases opposed to sampling error account for the major part.

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<sup>2</sup> See Chapter 2 and the Appendix for more details on how the effects of the different biases are assessed.

For Pension Credit by family type, estimates of unclaimed amounts should be treated with caution. This is because the sample sizes for estimated entitled non-recipients, on which the figures are based, tend to be small. This is especially the case for 2003/2004, where estimates are based on only six months' of data. Furthermore, they are based on a sample that includes a number of false ENRs who cannot be identified and removed.

Additional tables are presented in the 'Further Analysis' section which give an indication of where entitled non-recipients of Pension Credit appeared in the household income distribution for Great Britain. It also compares the characteristics of ENRs of different components of Pension Credit and different family types.

### **Technical note on the results in this chapter**

Pension Credit replaced Minimum Income Guarantee mid-way through 2003/2004. Results for 2003/2004 are re-presented here for comparison. Because they are based on only six months' worth of data, and also given that they relate to the first six months after the introduction of the benefit, they should be treated with caution. While figures for 2003/2004 have been annualised to make it easier to compare across different years and benefits, the estimates of the total range unclaimed do not represent the actual amounts of unpaid Pension Credit over 2003/2004. Although we have done this to allow for comparison with estimates for 2004/2005, any comparisons made should be treated with caution. The commentary in this chapter has taken this into account.

The introduction of Pension Credit resulted in, for a significant number of claimants, entitlements being awarded some time after the introduction of the new benefit in October 2003, but backdated by up to 12 months. This was part of a deliberate policy by the Pension Service to introduce Pension Credit in a staged and managed fashion, to avoid bottlenecks in the number of claims being processed, but without financially disadvantaging customers. Cases where payments were made some time after a pensioner became entitled, but in respect of 2004/2005, have been incorporated into both the estimates of recipients and those who were entitled yet not receiving in the following results. This means that the recipient count will differ from recipient counts published by other sources, as it includes recipients who eventually received Pension Credit at a later date, but in respect of 2004/2005.

Although the number of backdated claims has fallen considerably in 2004/2005 compared to 2003/2004, these figures have still taken account of those claims that were paid in 2005/2006, but were backdated to 2004/2005. Had the analysis reported in this publication not taken into consideration the effect of the significant amount of backdating that occurred with Pension Credit, estimates of take-up would have been lower. For example, the lower and upper ranges of caseload take-up would have been around 12 to 15 percentage points lower for Pension Credit as a whole in 2003/2004, and would have been around three percentage points lower for Pension Credit as a whole in 2004/2005.

The DWP research report No: 197 "Entitled but not claiming? Pensioners, the Minimum Income Guarantee and Pension Credit" provided evidence of significant under-reporting of capital holdings by pensioners responding to the Family Resources Survey. Estimates of pensioner take-up presented in this chapter have been adjusted to take account of this potential source of bias.

In addition, there is evidence to suggest that some pensioner respondents to the Family Resources Survey may not correctly report which benefits they are receiving, resulting in an increase in the number of apparent entitled non-recipients of Pension Credit. An exercise examining such responses revealed a substantial number of 'hidden' Pension Credit recipients; the estimates of pensioner take-up for 2004/2005 incorporate the results of this investigation.

Further explanation of the above problems, and how they have been addressed in this publication, is provided in Chapter 2.

## Results

**Table 1.1: Caseload Take-up of Pension Credit**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Thousands)</i>
Number of Recipients	2003/2004	580	460	1,450	2,490
	2004/2005	600	490	1,490	2,570
Range of Entitled Non-Recipients	2003/2004	380 : 550	240 : 370	610 : 960	1,260 : 1,840
	2004/2005	380 : 530	200 : 320	540 : 810	1,140 : 1,630
					<i>(Percentages)</i>
Take-up Ranges	2003/2004	51 : 61	56 : 66	60 : 70	58 : 66
	2004/2005	53 : 61	60 : 71	65 : 73	61 : 69

Note:

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the number of entitled non-recipients have therefore been annualised. See Chapter 2 for more details.

**Table 1.2: Expenditure Take-up of Pension Credit**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Pounds)</i>
Average Weekly Amounts Claimed	2003/2004	35.0	38.2	39.5	38.9
	2004/2005	47.0	42.9	37.7	40.7
Average Weekly Amounts Unclaimed	2003/2004	25.8	22.2	22.3	23.4
	2004/2005	27.5	21.1	21.0	23.4
Median Weekly Amounts Unclaimed	2003/2004	16.5	11.6	15.4	15.1
	2004/2005	14.9	13.4	15.7	14.9
					<i>(Millions of Pounds)</i>
Total amount Claimed	2003/2004	1,060	910	2,980	4,950
	2004/2005	1,450	1,090	2,910	5,460
Total Range Unclaimed	2003/2004	570 : 840	320 : 480	770 : 1,200	1,630 : 2,370
	2004/2005	600 : 820	250 : 400	630 : 940	1,460 : 2,070
					<i>(Percentages)</i>
Take-Up Ranges	2003/2004	56 : 65	65 : 74	71 : 79	68 : 76
	2004/2005	64 : 71	73 : 81	76 : 82	72 : 79

Note:

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the total range unclaimed have therefore been annualised. See Chapter 2 for more details.

By caseload, take-up by single female pensioners appeared to be higher than for pensioner couples. By expenditure, take-up by both single male and single female pensioners appeared to have been higher than for pensioner couples.

Comparisons between 2003/2004 and 2004/2005 are complicated by the greater rise in Pension Credit applicable amounts, relative to Retirement Pension, that occurred in April 2004. These changes would have increased the number of pensioners entitled to Pension Credit. The overall changes reported in Tables 1.1 and 1.2 therefore reflect two factors:

- a) any changes in take-up, between the two periods, among the groups who were entitled to Pension Credit in the second half of 2003/2004 and would have been entitled in 2004/2005, even if Pension Credit and Retirement Pension had been uprated by the same percentage; and

## Pension Credit

- b) the rate of take-up among those who were entitled in 2004/2005 but would not have been entitled without the increases introduced in April 2004.

Detailed examination of the evidence suggests that, among pensioners who would have been entitled to PC even without the April 2004 rises, caseload take-up rose – possibly by over five percentage points between the last six months of 2003/2004 and 2004/2005. This rise was greatest for single pensioners.

A lower rate of take-up among those newly entitled to Pension Credit tended to reduce the aggregate take-up in 2004/2005. As a result, in total there appeared to be a smaller increase in pensioners' take-up of Pension Credit, of around three to four percentage points. For pensioner couples, there was no clear change in take-up, while there were small increases in the aggregate take-up rate for single male and single female pensioners.

**Table 1.3: Caseload Take-up of Guarantee Credit only**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Thousands)</i>
Number of Recipients	2003/2004	180	170	360	710
	2004/2005	180	180	370	730
Range of Entitled Non-Recipients	2003/2004	60 : 110	30 : 70	60 : 150	170 : 320
	2004/2005	90 : 150	30 : 70	40 : 100	170 : 310
					<i>(Percentages)</i>
Take-up Ranges	2003/2004	61 : 75	70 : 84	71 : 86	69 : 81
	2004/2005	55 : 68	73 : 84	78 : 89	70 : 81

**Notes:**

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the number of entitled non-recipients have therefore been annualised. See Chapter 2 for more details.
2. Comparisons over time for Pensioner Couples should be treated with caution due to changes in biases.

**Table 1.4: Expenditure Take-up of Guarantee Credit only**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Pounds)</i>
Average Weekly Amounts Claimed	2003/2004	80.4	69.6	59.3	67.9
	2004/2005	90.3	73.8	61.4	71.4
Average Weekly Amounts Unclaimed	2003/2004	65.2	62.2	48.5	57.2
	2004/2005	66.1	51.5	45.6	56.0
Median Weekly Amounts Unclaimed	2003/2004	52.5	68.1	35.1	44.1
	2004/2005	52.5	38.7	30.5	42.2
					<i>(Millions of Pounds)</i>
Total Amount Claimed	2003/2004	740	630	1,110	2,480
	2004/2005	850	690	1,170	2,710
Total Range Unclaimed	2003/2004	240 : 450	130 : 280	170 : 430	540 : 1,030
	2004/2005	330 : 570	110 : 210	120 : 270	540 : 950
					<i>(Percentages)</i>
Take-Up Ranges	2003/2004	62 : 76	70 : 83	72 : 87	71 : 82
	2004/2005	60 : 72	77 : 87	81 : 91	74 : 83

**Notes:**

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the total range unclaimed have therefore been annualised. See Chapter 2 for more details.
2. Estimates of the 'Average Weekly Amount Claimed', 'Total Amount Claimed' and the Take-Up ranges for Single Female Pensioners, and the 'Total Amount Claimed' for All Pensioners have been revised since the 2003/2004 publication due to the discovery of an error.
3. Due to small sample sizes, the estimate of the 'Median Weekly Amounts Unclaimed' for Single Male Pensioners in 2003/2004 should be treated with caution.
4. Comparisons over time for Pensioner Couples should be treated with caution due to changes in biases.

By caseload, take-up of the Guarantee Credit element of Pension Credit was higher than the take-up of Pension Credit as a whole. This appeared to be the case across all family types, with the exception of pensioner couples.

Take-up of the Guarantee Credit appeared to be lower among pensioner couples than among single male and single female pensioners. The result stands for both caseload and expenditure measures of take-up.

There was no evidence of any change in take-up for those entitled to the Guarantee Credit only, between 2003/2004 and 2004/2005 for pensioners as a whole. There was some evidence of a slight fall in take-up for

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pensioner couples, although it is hard to be sure given the changes in biases over the two years. There was no clear change in take-up for single male pensioners over the same period, while there appeared to have been a small increase for single female pensioners.

Take-up of the Guarantee Credit may have been marginally higher had Pension Credit applicable amounts not been increased at a higher rate than the Retirement Pension in April 2004 (see commentary on Tables 1.1 and 1.2 for further explanation).

**Table 1.5: Caseload Take-up of Guarantee and Savings Credit**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Thousands)</i>
Number of Recipients	2003/2004	190	200	840	1,230
	2004/2005	200	200	840	1,250
Range of Entitled Non-Recipients	2003/2004	110 : 180	50 : 120	280 : 450	460 : 730
	2004/2005	50 : 90	40 : 100	180 : 360	280 : 530
					<i>(Percentages)</i>
Take-up Ranges	2003/2004	51 : 63	63 : 78	65 : 75	63 : 73
	2004/2005	69 : 81	66 : 83	70 : 82	70 : 81

**Notes:**

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the number of entitled non-recipients have therefore been annualised. See Chapter 2 for more details.
2. Comparisons over time for Pensioner Couples should be treated with caution due to changes in biases.

**Table 1.6: Expenditure Take-up of Guarantee and Savings Credit**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Pounds)</i>
Average Weekly Amounts Claimed	2003/2004	36.4	33.0	35.7	35.5
	2004/2005	43.9	34.2	37.0	37.6
Average Weekly Amounts Unclaimed	2003/2004	33.8	28.4	29.8	30.6
	2004/2005	31.8	27.0	28.2	28.9
Median Weekly Amounts Unclaimed	2003/2004	25.5	20.7	23.1	23.5
	2004/2005	27.0	22.0	22.9	24.0
					<i>(Millions of Pounds)</i>
Total amount Claimed	2003/2004	370	340	1,570	2,270
	2004/2005	470	360	1,620	2,440
Total Range Unclaimed	2003/2004	220 : 360	90 : 190	460 : 750	770 : 1,220
	2004/2005	80 : 160	70 : 160	290 : 550	450 : 840
					<i>(Percentages)</i>
Take-Up Ranges	2003/2004	50 : 62	63 : 79	68 : 77	65 : 75
	2004/2005	74 : 85	69 : 84	75 : 85	74 : 85

**Notes:**

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the total range unclaimed have therefore been annualised. See Chapter 2 for more details.
2. Estimates of the 'Average Weekly Amount Claimed', 'Total Amount Claimed' and the Take-Up ranges for Single Female Pensioners, and the 'Total Amount Claimed' for All Pensioners have been revised since the 2003/2004 publication due to the discovery of an error.
3. Comparisons over time for Pensioner Couples should be treated with caution due to changes in biases.

Take-up by those pensioners who were eligible for both the Guarantee and Savings Credit elements of Pension Credit appeared to be, on the whole, higher than take-up of the Savings Credit component (Tables 1.7 and 1.8). It was, however, similar to the take-up of the Guarantee component of Pension Credit (Tables 1.3 and 1.4). By caseload and expenditure, it is not possible to say which family type had the highest take-up rate of Guarantee and Savings Credit.

Between the first six months of Pension Credit in 2003/2004 and 2004/2005, the take-up of Guarantee and Savings Credit may have increased for pensioners as a whole. This result held across all family types. Take-up of GC and SC would have been slightly higher still had Pension Credit applicable amounts not been increased at a higher rate than the Retirement Pension.

**Table 1.7: Caseload Take-up of Savings Credit only**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Thousands)</i>
Number of Recipients	2003/2004	210	90	240	540
	2004/2005	210	110	280	600
Range of Entitled Non-Recipients	2003/2004	160 : 250	140 : 240	310 : 490	630 : 960
	2004/2005	230 : 300	90 : 140	250 : 350	590 : 770
					<i>(Percentages)</i>
Take-up Ranges	2003/2004	46 : 57	27 : 38	33 : 44	36 : 46
	2004/2005	41 : 47	44 : 55	44 : 52	43 : 50

Notes:

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the number of entitled non-recipients have therefore been annualised. See Chapter 2 for more details.
2. Comparisons over time for Pensioner Couples should be treated with caution due to changes in biases.

**Table 1.8: Expenditure Take-up of Savings Credit only**

	Year	Pensioner Couples	Single Male Pensioners	Single Female Pensioners	All Pensioners
					<i>(Pounds)</i>
Average Weekly Amounts Claimed	2003/2004	9.5	9.1	8.9	9.2
	2004/2005	10.9	9.0	9.3	9.8
Average Weekly Amounts Unclaimed	2003/2004	8.7	7.1	8.5	8.3
	2004/2005	9.1	7.5	7.4	8.1
Median Weekly Amounts Unclaimed	2003/2004	8.6	7.6	9.1	8.5
	2004/2005	8.9	7.3	7.1	7.8
					<i>(Millions of Pounds)</i>
Total amount Claimed	2003/2004	100	40	110	260
	2004/2005	120	50	130	300
Total Range Unclaimed	2003/2004	80 : 120	60 : 100	150 : 230	280 : 430
	2004/2005	120 : 150	40 : 60	100 : 140	260 : 340
					<i>(Percentages)</i>
Take-Up Ranges	2003/2004	46 : 57	30 : 42	33 : 43	38 : 48
	2004/2005	44 : 50	46 : 58	48 : 56	47 : 54

Notes:

1. Estimates for 2003/2004 relate to October 2003 to March 2004, the first six months of Pension Credit. Estimates of the total range unclaimed have therefore been annualised. See Chapter 2 for more details.
2. Estimates of the 'Average Weekly Amount Claimed', 'Total Amount Claimed' and the Take-Up ranges for Single Female Pensioners, and the 'Total Amount Claimed' for All Pensioners have been revised since the 2003/2004 publication due to the discovery of an error.
3. Comparisons over time for Pensioner Couples should be treated with caution due to changes in biases.

The Savings Credit element of Pension Credit had the lowest rate of take-up. Take-up appeared to be around three-fifths of Guarantee Credit only take-up (Table 1.3 and 1.4). Due to the extent of biases we cannot be sure if take-up of the Savings Credit differed by family type, for either caseload or expenditure take-up.

Take-up of the Savings Credit element appeared to have increased between 2003/2004 and 2004/2005. By family type, this was the case for both single male and single female pensioners. In contrast, pensioner couples appeared to have seen a decrease between the two years, although it is hard to be sure given the change in biases for this group. Examination of the evidence suggests that, among pensioner couples who would have been entitled to Savings Credit, even without the April 2004 increases, caseload take-up remained the same between the last six months of 2003/2004 and 2004/2005. A lower take-up rate for those pensioner couples who were

newly entitled in 2004/2005 tended to reduce the aggregate take-up. Overall, for all pensioners, take-up of the Savings Credit would have been slightly higher had applicable amounts not been uprated by a greater amount than Retirement Pension in April 2004.

## Further analysis of those entitled to but not receiving Pension Credit

In this section we describe the characteristics of those who were entitled to Pension Credit but were not receiving it (ENRs). The FRS-based analyses have not been corrected for the biases that may be inherent in estimates of entitlement to income-related benefits – that is, they may be based on the data for those who appear to be ENRs but will not all actually be ENRs, for example, due to them receiving a subsequent backdated Pension Credit claim (for more on this see Chapter 2) – and so they should be treated with some caution. Nonetheless, where possible, results relate to those identified as ENRs in our modelling taking account micro-level information indicating potential ‘hidden’ recipients of Pension Credit. In practice, a significant proportion of those appearing to be ENRs will not be true ENRs, and a significant proportion of true ENRs may not be identified in our modelling. In the following ‘Further Analysis’, the sample of those entitled to Guarantee Credit only and Guarantee and Savings Credit have been combined and labelled as ‘All Guarantee Credit’. Where appropriate, we contrast those identified as ENRs with the characteristics of those who were entitled to and in receipt of Pension Credit and in doing so explore some of the possible causes of non-take-up. We have also drawn upon results of DWP social research in order to provide a better understanding of barriers to take-up.

### Awareness of eligibility to Pension Credit

Research commissioned by the DWP in 2004 attempted to identify reasons why some pensioners were not taking up Pension Credit and tried to ascertain what steps DWP could take to remove these barriers. The report<sup>3</sup>, number 234, focused on those who appeared to be ENRs of Pension Credit. It found that one reason for non-take-up may be because pensioners are unaware of Pension Credit eligibility rules, and are not fully familiar with the circumstances in which they can claim. Of pensioners most likely to be ENRs, 13% believed (wrongly) that if you live with your adult children, you cannot apply for Pension Credit. Also, 17% thought that owning their own home would also make them ineligible for Pension Credit. Additionally, 14% believed that those who receive financial help from their families would be barred from claiming Pension Credit. The most common reason for non-take-up of Pension Credit was that some older people felt that they would not be eligible: 20% of probable ENRs thought that they were ineligible as they had other pensions; 9% thought that they had too much money; 7% gave the reason that they had savings; and 6% stated that their income was too high. So although some eligible pensioners may want to claim Pension Credit, they could feel that these factors will prevent them from being eligible.

More recent qualitative research, published in 2006 and carried out by IFF Research Ltd<sup>4</sup>, has provided further insight into the barriers that exist to claiming Pension Credit. This report, number 336, suggested that there are three primary barriers that prevent older people from claiming Pension Credit. These are: a belief that they are not eligible; a concern about how the receipt of Pension Credit would interact with other benefits they were currently receiving; and a lack of awareness of Pension Credit. The most common of these was the perceived ineligibility, for reasons such as they were working, were in receipt of a (small) occupational pension, that they could ‘manage’ and that they had been turned down for benefits in the past. Concern about interaction with other benefits centred around the perception that they would be worse off if they applied. The latter barrier, a lack of awareness of Pension Credit, was relatively minor in comparison to the first two.

<sup>3</sup> *Encouraging take up: awareness of and attitudes to Pension Credit* Talbot, C., Adelman, L. & Lilly, R (ISBN 1 84 123 792 2) For a summary of this report see the following website:  
<http://www.dwp.gov.uk/asd/asd5/summ2005-2006/234summ.pdf>

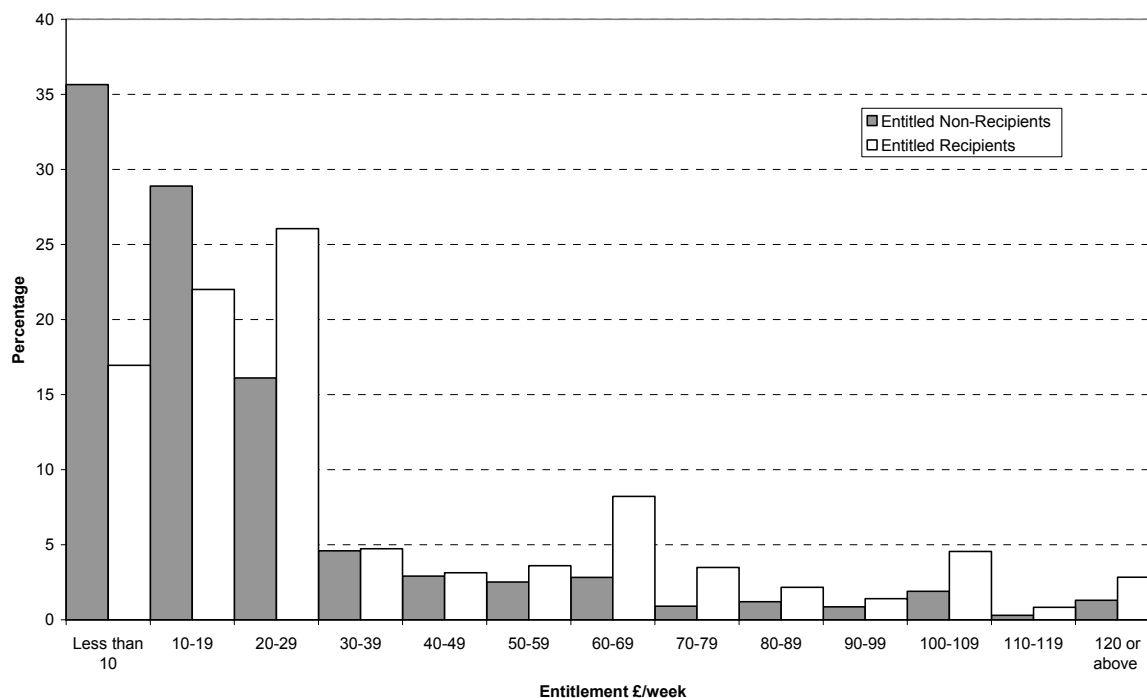
<sup>4</sup> *Understanding the relationship between the barriers and triggers to claiming Pension Credit*. Bunt, K., Adams L. & Leo, C. (ISBN 1 84123 990 9) The report can be found at the following:  
<http://www.dwp.gov.uk/asd/asd5/rports2005-2006/rrep336.pdf>

## Pension Credit

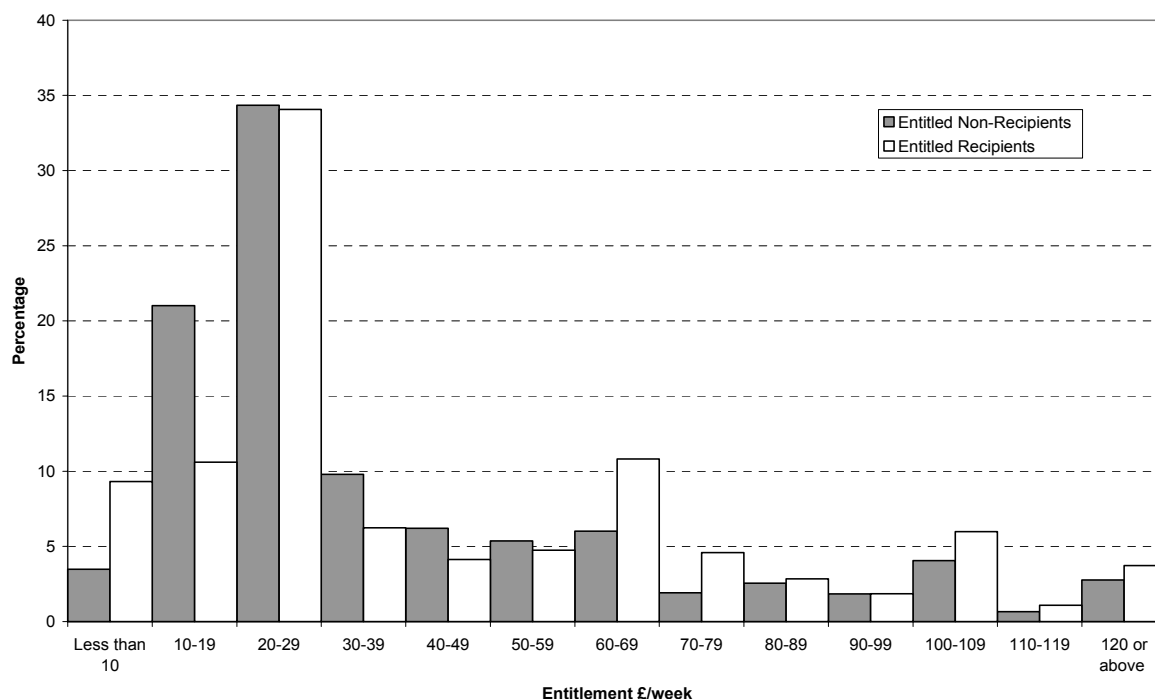
The research also found that there were a number of secondary barriers that worked to reinforce decisions not to apply. These centred around the application process and included such things as an unwillingness to disclose financial information and a complicated application process. Some of the issues described above, along with some others, are dealt with in the sections that follow.

### Amounts unclaimed

**Figure 1.1: Percentage of Entitled Non-Recipients and Entitled Recipients by band of entitlement to Pension Credit**



**Figure 1.2: Percentage of Entitled Non-Recipients and Entitled Recipients by band of entitlement to All Guarantee Credit**



**Figure 1.3: Percentage of Entitled Non-Recipients and Entitled Recipients by band of entitlement to Savings Credit**

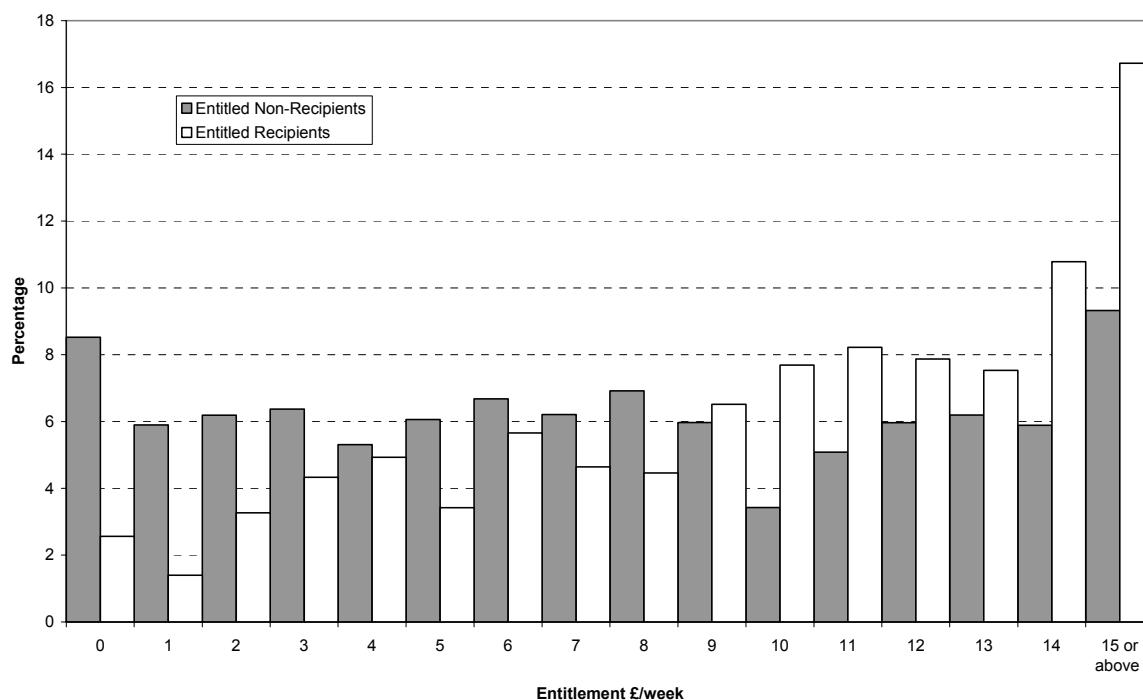


Figure 1.1 shows that, on the whole, pensioners entitled to but not receiving Pension Credit tended to be entitled to smaller amounts than their entitled recipient counterparts, and shows that the distribution of amounts unclaimed was heavily skewed towards smaller amounts. Figure 1.2, which demonstrates entitlement amounts for those entitled to the Guarantee element (with or without the Savings element), shows that the picture is not as clear for this group. Figure 1.3 shows that for Savings Credit, while unclaimed amounts tended to be fairly evenly distributed, claimed amounts were skewed towards larger amounts. Pension Credit ENRs were twice as likely as ERs to be in the 'less than £10' per week entitlement band. At the upper end of entitlement, recipients were more than twice as likely as entitled non-recipients to be entitled to £60 or more.

This suggests that one possible reason why people do not take-up benefit is because they regard the amounts they might receive as not worth the effort of claiming. However, the IFF Ltd research found that the consideration of the amount they could receive was only a minor barrier to claiming Pension Credit. It was found that older people had very limited awareness of the range of Pension Credit entitlements and were unaware that it could be awarded at different levels. The research suggested that a more likely barrier was perceived ineligibility, and it may therefore be the case that those pensioners with lower entitlement amounts may be less confident of their entitlement, perceiving themselves to be ineligible, and therefore do not claim. Whatever the reason, 18% of PC ENRs were entitled to less than £5 per week compared with 10% of entitled recipients.

The earlier DWP research report number 234, mentioned above, found that 63% of those most likely to be ENRs said that they would claim if they knew that they would be entitled to up to £5 per week and over 77% said that they would claim if they knew that they would receive up to £15 per week or more. This suggests that around one-in-five ENRs would remain highly resistant to applying for Pension Credit irrespective of any amount they might receive.

### Age profile

In this section we look at how age may affect the take-up of Pension Credit, particularly focussing on those aged 75 and over.

**Table 1.9: The percentage of Entitled Non-Recipients and Entitled Recipients over 75 by family type**

	Pension Credit		All Guarantee Credit		Savings Credit	
	ENRs	ERs	ENRs	ERs	ENRs	ERs
Pensioner couples	42%	45%	29%	40%	51%	54%
Single males	51%	43%	40%	37%	58%	61%
Single females	64%	65%	65%	64%	63%	70%
<b>All Pensioners</b>	<b>53%</b>	<b>57%</b>	<b>49%</b>	<b>54%</b>	<b>57%</b>	<b>63%</b>

Table 1.9 shows that for all pensioners, recipients of Pension Credit tended to be slightly older than their entitled non-recipient counterparts in 2004/2005. This held for all Pension Credit types. By family type breakdown, the same pattern generally held except for single male pensioners where, for PC as a whole and All GC, ENRs tended to be slightly older than entitled recipients. The table also shows that a greater proportion of single female Pension Credit ERs and ENRs were aged 75 or over than either single males or pensioner couples. The pattern held for all Pension Credit types.

### Tenure profile

**Figure 1.4: Percentage of Entitled Non-Recipients and Entitled Recipients of Pension Credit by tenure type**

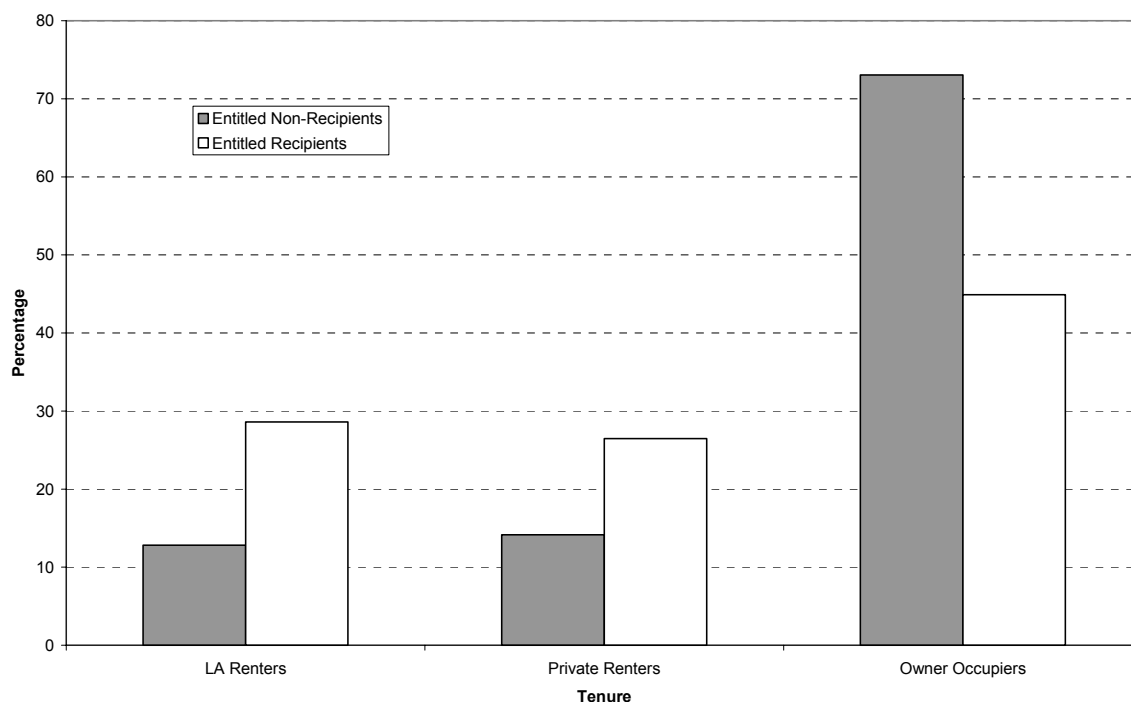


Figure 1.4 shows that 13% of ENRs of Pension Credit were LA renters compared to 29% of ERs; 14% of pensioner ENRs were private renters compared to 26% of ERs; and 73% of pensioner ENRs were owner-occupiers compared to 45% of ERs. It is possible that this large difference between ERs and ENRs who were

owner-occupiers is due to the fact that some pensioners may believe that they are not eligible for Pension Credit if they own their own home.

### Receipt of Attendance Allowance or Disability Living Allowance

**Table 1.10: Percentage of Entitled Non-Recipients and Entitled Recipients who received Attendance Allowance or Disability Living Allowance**

Pension Credit type	Entitled Non-Recipients	Entitled Recipients
Pension Credit	24%	37%
All Guarantee Credit	29%	41%
Savings Credit	20%	26%

Table 1.10 shows that for all Pension Credit types, a greater proportion of entitled recipients were in receipt of Attendance Allowance or Disability Living Allowance compared to entitled non-recipients. This suggests that pensioners on either AA or DLA may be more likely to claim the Pension Credit that they are entitled to.

### Getting by on other income

Another possible explanation for non-take-up is that ENRs ‘get by’ on other sources of income. The IFF Ltd research quoted above found that one reason for perceived ineligibility was that they were able to ‘cope’ with the income they had.

For Pension Credit as a whole, 71% of single pensioner ENRs had other income (excluding Housing Benefit and Council Tax Benefit) of more than £105 per week compared with 58% of entitled recipients. This suggests that, for single people entitled to Pension Credit, the existence of significant amounts of other income may be a factor in their decision not to claim. The same applies when looking at pensioner couples, where 83% of Pension Credit ENRs and 73% of ERs had other income exceeding £150 per week. This suggests that the existence of significant amounts of other income may dissuade pensioner ENRs from claiming Pension Credit.

By looking in more detail at the family type split of pensioners we find that, for certain groups, the differences between ENRs and ERs appear to be greater than for others. For Pension Credit overall, 90% of single male pensioner ENRs of PC had other income greater than £75 per week; this compares to 80% of ERs. The corresponding figures for single female pensioners were 95% and 91% respectively.

The previous analysis includes income that is taken into account when working out entitlement to Pension Credit, so it focuses on those with smaller entitlements. If we define ‘other income’ as all the benefits that are ignored when entitlement to Pension Credit is assessed (such as Housing Benefit, Council Tax Benefit, Attendance Allowance, Disability Living Allowance and Winter Fuel Payment), then we can get some idea whether ENRs were more or less likely to try to ‘get by’ on the benefit income they already had. For single pensioners, 8% of ENRs and 27% of ERs had benefit income of more than £75 per week. For couple pensioners, 3% of ENRs and 17% of ERs had benefit income that was greater than £100 per week. This suggests that ENRs may not be trying to ‘get by’ on the benefit income they already receive. In fact, those with higher benefit income may be more aware of their entitlement and therefore more willing and likely to claim PC.

One further reason why pensioner ENRs might not claim their entitlement is because they believe having ‘other pensions’ prevents them from being entitled to Pension Credit. This was a finding of the report number 336 quoted above. Table 1.11 (below) shows that ENRs were more likely to be in receipt of an occupational pension than entitled recipients, which, if they believed this made them ineligible, may have contributed to their decision not to claim Pension Credit.

**Table 1.11: Percentage of ENRs and ERs who were in receipt of an occupational pension by PC type**

<b>Pension Credit Type</b>	<b>Entitled Non-Recipients</b>	<b>Entitled Recipients</b>
Pension Credit	36%	20%
All Guarantee Credit	23%	13%
Savings Credit	47%	42%

### **Living with other benefit units**

A further possible explanation for non-take-up of Pension Credit is that ENRs may share resources with others living in the same household. Additionally, as indicated by the research quoted earlier, this may lead potentially entitled pensioners to believe they are ineligible for Pension Credit. Overall, 19% of ENRs and 17% of entitled recipients shared their household with other benefit units. If we look at the components of PC, 24% of entitled non-recipients and 18% of entitled recipients of All Guarantee Credit were living with other benefit units in the household. This compares with 15% and 13% respectively for Savings Credit.

Of the PC ENRs living in households with more than one benefit unit, 75% lived with benefit units with more than £150 per week of gross income. This compares to 68% in the case of entitled recipients living with other benefit units. This pattern holds for all Pension Credit types. This suggests that the benefit units living with entitled recipients tended to have less gross income (and therefore less resources to share) than their counterparts who lived with ENRs, possibly contributing to their decisions to claim.

### **Marital status**

The DWP research report 234 also found that pensioners who were divorced, separated or widowed were more likely to claim their entitlement to Pension Credit than others, indicating that pensioners without the support of their former partner are likely to feel vulnerable and in need of help from others. Evidence from the FRS (displayed below in Table 1.12) supports this finding with more entitled recipients being divorced, widowed or separated compared to entitled non-recipients.

**Table 1.12: Percentage of ENRs and ERs who are either divorced, widowed or separated by PC type**

<b>Pension Credit type</b>	<b>Entitled Non-Recipients</b>	<b>Entitled Recipients</b>
Pension Credit	55%	69%
All Guarantee Credit	57%	71%
Savings Credit	53%	63%

### **Attitudes towards Pension Credit**

Attitudes towards Pension Credit may be another cause of non-take-up amongst entitled pensioners. The DWP research report 234 mentioned above found that 45% of those most likely to be ENRs believed that the government is doing more for pensioners on low income. However, it was also found that around three-quarters of possible ENRs studied believed that the state benefit system does not reward those who save for their retirement, indicating a possible lack of awareness about the Savings Credit element of Pension Credit or the

amount that it could offer. Only 47% believed that they would be better off if they received Pension Credit. However, 78% of those who had claimed Pension Credit said they were now better off.

The IFF Ltd research found that one of the secondary barriers to claiming was the opinion that pensioners should not have to ask for financial assistance that they needed. Some of those interviewed had a particular concern about having to apply for a benefit in case they were subsequently turned down, as they felt this would make them appear 'greedy'.

### Position of entitled non-recipients in the income distribution

This section provides an analysis of the position in the household income distribution for Great Britain of ENRs of Pension Credit and, separately, ENRs of the Guarantee and Savings elements of Pension Credit. Analysis is presented for income both before and after housing costs in 2004/2005, and including and excluding those ENRs in receipt of Attendance Allowance (AA) or Disability Living Allowance (DLA). The following tables have been produced by combining the data sets used to produce this publication with the data sets used to produce the 'Households Below Average Income' publication. This means we have combined benefit unit based results (take-up statistics) with household equivalised income based results (Households Below Average Income). For some ENRs, their position in the income distribution may have been affected by the incomes of other household members. Small sample sizes for the number of ENRs in each quintile have prevented a more detailed breakdown.

**Table 1.13: Position of ENRs of Pension Credit in the income distribution**

Year / Quintiles		Income Before Housing Costs (BHC)			Income After Housing Costs (AHC)		
		1	2	3 - 5	1	2	3 - 5
<b>Pensioners</b>	2003/2004	59%	26%	15%	47%	36%	17%
	2004/2005	67%	22%	12%	54%	31%	15%
<b>Pensioners excluding those in receipt of AA/DLA</b>	2003/2004	64%	25%	10%	51%	37%	12%
	2004/2005	71%	20%	9%	57%	31%	11%

Quintile 1 represents the bottom twenty per cent of the population with the lowest household incomes, while quintile 5 reflects the top twenty per cent with the highest household incomes.

Table 1.13 shows that two-thirds of pensioner ENRs of Pension Credit were in the bottom quintile of the income distribution in 2004/2005 before housing costs. On an after housing costs basis, just over half of pensioners were in the bottom quintile.

A slightly larger proportion of pensioner ENRs of Pension Credit were in the bottom quintile of the income distribution when those in receipt of AA or DLA were excluded from the analysis; this was the case both before and after housing costs. After housing costs the estimate was nearly three-fifths of pensioner ENRs in 2004/2005.

**Table 1.14: Position of ENRs of All Guarantee Credit in the income distribution**

Year / Quintiles		Income Before Housing Costs (BHC)			Income After Housing Costs (AHC)		
		1	2	3 - 5	1	2	3 - 5
<b>Pensioners</b>	2003/2004	60%	26%	14%	56%	26%	19%
	2004/2005	69%	18%	13%	65%	20%	15%
<b>Pensioners excluding those in receipt of AA/DLA</b>	2003/2004	69%	23%	8%	67%	23%	10%
	2004/2005	75%	15%	10%	73%	17%	10%

Table 1.14 shows that just over two-thirds of pensioner ENRs of All Guarantee Credit were in the bottom quintile of the income distribution before housing costs in 2004/2005. This was just under two-thirds after housing costs were deducted from income. When those in receipt of AA or DLA were excluded from the analysis, three-quarters of pensioner ENRs were in the bottom quintile of the income distribution before housing costs, a similar figure to that seen after housing costs were deducted. The proportion of pensioners in the bottom quintile was larger for ENRs of All Guarantee Credit than for ENRs of Pension Credit as a whole, especially after housing costs.

**Table 1.15: Position of ENRs of Savings Credit in the income distribution**

Year / Quintiles		Income Before Housing Costs (BHC)			Income After Housing Costs (AHC)		
		1	2	3 - 5	1	2	3 - 5
<b>Pensioners</b>	2003/2004	58%	27%	15%	38%	47%	16%
	2004/2005	65%	24%	10%	44%	41%	15%
<b>Pensioners excluding those in receipt of AA/DLA</b>	2003/2004	60%	28%	12%	39%	48%	13%
	2004/2005	68%	24%	8%	46%	43%	12%

Table 1.15 shows that just under two-thirds of ENRs of Savings Credit were in the bottom quintile of the income distribution in 2004/2005. This was reduced to just over two-fifths after housing costs were deducted from income. Removing from the analysis pensioners who were in receipt of AA or DLA had little effect on the proportion of ENRs who were in the bottom quintile. Compared to PC ENRs as a whole, there was a similar proportion of ENRs of Savings Credit in the bottom quintile on a before housing costs basis; however, on an after housing costs basis, there were fewer SC ENRs in the bottom quintile.

### **The percentage of entitled non-recipients and entitled recipients living on low incomes**

This section provides an analysis of the percentage of ENRs and ERs of Pension Credit and its components, living in low-income households. One commonly-used indicator of low income is whether a household is below 60 per cent of contemporary median income – the median being the income below which half the population lie.

This indicator of low income is used in the following analysis, which as in the previous section combines benefit unit level take-up data sets with household equivalised income results from the 'Households Below Average Income' publication. Again, similar to the previous analysis, the position of some ENRs and ERs in the income distribution may have been affected by the incomes of other household members. Figures have been calculated both before housing costs (BHC) and after housing costs (AHC) in 2004/2005.

**Table 1.16: Percentage of ENRs and ERs of Pension Credit below 60 per cent of contemporary median income**

		Year/Percentage	Before Housing Costs (BHC)	After Housing Costs (AHC)
<b>Pensioners</b>	<b>ENRs</b>	2003/2004	51%	49%
		2004/2005	59%	53%
	<b>ERs</b>	2003/2004	30%	28%
		2004/2005	29%	27%

Table 1.16 shows that, in 2004/2005, around three-fifths of pensioners who were entitled to but were not receiving Pension Credit lived in low-income households on a before housing costs measure. This was just over half on an after housing costs basis. For entitled recipients of the benefit, around three-tenths were in low-income households on both a before and after housing costs basis.

**Table 1.17: Percentage of ENRs and ERs of All Guarantee Credit below 60 per cent of contemporary median income**

		Year/Percentage	Before Housing Costs (BHC)	After Housing Costs (AHC)
<b>Pensioners</b>	<b>ENRs</b>	2003/2004	55%	57%
		2004/2005	64%	65%
	<b>ERs</b>	2003/2004	31%	29%
		2004/2005	29%	29%

Table 1.17 shows that, before the deduction of housing costs, just under two-thirds of ENRs of All Guarantee Credit were in households below 60% of median income in 2004/2005, whereas just under three-tenths of entitled recipients to All GC were in this position. These proportions were similar on the after housing costs measure.

**Table 1.18: Percentage of ENRs and ERs of Savings Credit below 60 per cent of contemporary median income**

Year/Percentage		Before Housing Costs (BHC)	After Housing Costs (AHC)	
<b>Pensioners</b>	<b>ENRs</b>	2003/2004	47%	41%
		2004/2005	54%	42%
	<b>ERs</b>	2003/2004	25%	22%
		2004/2005	29%	24%

Table 1.18 shows that the estimates of ENRs and ERs of Savings Credit before and after housing costs were lower than for All Guarantee Credit and Pension Credit as a whole. Just over half of pensioner ENRs were below 60 per cent of contemporary median income; this fell to around two-fifths after housing costs were deducted. ERs of Savings Credit were less likely to be below this threshold both before and after housing costs were deducted from income.

# Chapter 2

## Methods and Data Sources

The statistics presented in this publication are based on the following definitions of take-up:

Caseload:

$$\frac{\text{Average no. of Benefit Units (BUs) receiving benefit}}{\text{Average no. of BUs receiving benefit} + \text{Average no. of BUs entitled but not receiving benefit}}$$

Expenditure:

$$\frac{\text{Total amount of benefit received in the course of the year}}{\text{Total amount of benefit received} + \text{Total amount of benefit unclaimed}}$$

Take-up estimates are presented as ranges and are calculated in three stages. First, the baseline estimates are obtained from a combination of administrative data and Family Resources Survey (FRS) data. Secondly, an assessment of the biases in these estimates is made, using various sources of information, and range estimates are calculated. Finally, a 95% confidence interval is placed around the range estimates to take account of the potential effects of sampling variation. It can then be assumed that true take-up lies within the resulting range estimates.

### The Baseline Estimates

The DWP administrative records contain information on recipients (Rs) of Pension Credit, and analysis of the FRS produces information on entitled non-recipients (ENRs).

Using the definition of caseload take-up given above for Pension Credit gives a simple formula for baseline take-up:

$$\text{Caseload take-up} = \frac{R_{admin}}{R_{admin} + ENR_{FRS}}$$

where subscripts refer to the data source.

The formula for baseline expenditure take-up is as follows:

$$\text{Expenditure take-up} = \frac{R_{admin} \times \pounds R_{admin}}{(R_{admin} \times \pounds R_{admin}) + (ENR_{FRS} \times \pounds ENR_{FRS})}$$

with  $\pounds R$  and  $\pounds ENR$  being the average weekly amounts received by recipients and unclaimed by entitled non-recipients.

## Calculation of Error Ranges

We attempt to allow for the potential bias in the baseline estimates before applying the 95% confidence intervals. Earlier work<sup>5</sup> has identified five sources of error that can significantly distort the baseline estimates of caseload take-up:

- over-statement of entitlement - this occurs when a benefit unit that is not truly entitled to Pension Credit is calculated, by an analyst, to be entitled;
- under-statement of entitlement - this occurs when a benefit unit that is truly entitled to Pension Credit is calculated, by an analyst, not to be entitled;
- under-reporting of Pension Credit receipt in the FRS - this occurs when someone receiving Pension Credit fails to report receipt in the FRS interview. For example, under-reporting may occur as misreporting if a person receiving £70 a week Retirement Pension and £5 Pension Credit, reports that they actually receive £75 Retirement Pension;
- inaccurate grossing-up of FRS counts - as the FRS is a survey of only a sample of the population, counts derived from the FRS need to be grossed-up - i.e. multiplied up to reflect the true numbers of various family types and people of different ages in the population - to give meaningful estimates of the actual number of recipients or entitled non-recipients in the population. Inaccurate grossing-up will result in either under or over-estimation of the number of recipients or entitled non-recipients in the population;
- payment of Pension Credit to non-entitled benefit units - again this is fairly self-explanatory. It may occur for several reasons: administrative error, inaccurate information given to the benefit office or delays in responding to a change in circumstances.

An assessment of the extent of these errors must be made from available evidence, which unfortunately is often ambiguous. Generally though, it is possible to identify upper and lower limits on the likely extent of each error. These limits for individual errors are then grouped together to generate upper and lower bounds of the true number of entitled non-recipients. Of the errors listed above, only the last affects the count of recipients, but no adjustment is made because the definition of take-up allows for the inclusion of non-entitled recipients. Hence, the range of true take-up can be calculated from the recipient counts and the range for ENRs.

To produce estimates of true expenditure take-up, further information is required about the effect of errors on the estimated amounts which entitled non-recipients do not claim. At present there is insufficient information to tell whether these estimated amounts are systematically different from the true amounts left unclaimed. Without any extra information it is assumed that the estimated amount unclaimed is an unbiased estimator of the true amount unclaimed.

The range of true expenditure take-up is therefore calculated by combining the measured average amount received and the average estimated amount unclaimed with the higher and lower limits of true caseload take-up. For instance, if the true range of caseload take-up is from 65% to 80%, and the average claimed amount is £20, and the average unclaimed amount is estimated to be £5, then the range for true expenditure take-up will be from  $(65 \times 20) / [(65 \times 20) + (35 \times 5)]$  to  $(80 \times 20) / [(80 \times 20) + (20 \times 5)]$  i.e. from 88% to 94%.

This calculation is based on the assumption that estimates of the average amount unclaimed are accurate. In practice this may not always be the case, and so we cannot be as confident that true expenditure take-up lies within the range presented here as we can that true caseload take-up lies within its range. The average weekly amount unclaimed is presented as a single estimate as insufficient information is available to allow identification of a range. In practice, the 'All' average amount unclaimed is a weighted average of the average

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<sup>5</sup> *Analytical Notes: Number 3. The take-up of income related benefits: Inaccuracies in the estimation of take-up rates*, (1994) Gordon Harris, DSS.

amounts unclaimed by each family type, where the weights are the baseline estimates of the number of entitled non-recipients.

## Assessing the Extent of Errors in Baseline Estimates

In the process of moving from baseline estimates to take-up ranges, the key analytical work comes in estimating upper and lower limits for the five different sources of error, and then in assessing how these errors interact. This has to be done separately for each family type. A detailed account of the procedures involved is given in the Appendix and a broad summary is provided below.

The main errors, for which the baseline estimates may require correction, are: a) incorrect assessment, by analysts, of FRS cases' entitlement to Pension Credit; b) failure to identify Pension Credit recipients accurately; and c) failure to gross correctly the FRS-based count of the number of entitled non-recipients.

- a) To gauge the possible extent of incorrect entitlement assessment, we identify the grossed-up number of FRS cases reporting receipt of Pension Credit but appearing to be not entitled (NERs); and then compare this to the grossed FRS count of recipients. The existence of these NERs can be due to the actual payment of Pension Credit to non-entitled benefit units, but it can also be due to under-estimation of entitlement which might lead us to misclassify some truly entitled recipients as not entitled. More seriously, it can also lead us to misclassify some truly entitled non-recipients as not entitled, which results in a downward bias in our estimate of the total number of entitled non-recipients. The larger the number of NERs in relation to the FRS count of recipients, the greater the allowance we make for under-estimation of entitlement. Prior to publication of the 1997/1998 estimates we assumed that the incidence of over-estimation of entitlement - people wrongly added to the count of those entitled - equalled the incidence of under-estimation (the proportion of truly entitled people falsely regarded as non-entitled). Since then however, where we have found evidence of a significant difference in the incidence of under-estimation and over-estimation of entitlement we have taken it into account in our analysis. For 2004/2005, we found no evidence of a significant difference within modelling entitlements to Pension Credit.
- b) To assess the possible extent of incorrect identification of Pension Credit receipt, we consider the possible causes. One such cause could be that people are awaiting the outcome of a Pension Credit claim; the FRS allows us to identify such cases. Another cause is confusion between benefits, where people are receiving more than one benefit. We seek to identify the number of such cases; for some cases it is possible to re-classify some people, with confidence, as recipients.
- c) We also use a comparison of the grossed FRS count of Pension Credit recipients and the equivalent count from the administrative data. Where the FRS count falls short of the administrative count, this can be taken as evidence of: under-reporting of Pension Credit receipt, leading to under-estimation of take-up (via over-estimation of numbers entitled to but not receiving Pension Credit); or as under-grossing of the entitled population, leading to over-estimation of take-up (via under-estimation of numbers entitled to but not receiving their benefit). This ambiguity can lead to wide ranges of estimated take-up because the ranges have to cater for both possibilities. Where the FRS yields less of a shortfall the estimation consequently allows a narrower range.

## Methodological changes introduced since the last edition

There have been no methodological changes since the last edition. There has been, however, the discovery of an error in average weekly amounts claimed, for single female pensioners, for each of the different components of Pension Credit. This also impacted on the claimed amounts for All Pensioners for the three components of Pension Credit. Expenditure take-up figures for Pension Credit as a whole were unaffected. Both the 2003/2004 published and revised estimates are presented in Tables 2.1 and 2.2.

**Table 2.1: 2003/2004 previously published and revised estimates of take-up for single female pensioners**

		Expenditure
<u>Average Weekly Amounts Claimed</u>		<i>(Pounds)</i>
Guarantee Credit	2003/2004 published estimate	74.5
	2003/2004 revised estimate	59.3
Guarantee and Savings Credit	2003/2004 published estimate	41.5
	2003/2004 revised estimate	35.7
Savings Credit	2003/2004 published estimate	10.2
	2003/2004 revised estimate	8.9
<u>Total Amount Claimed</u>		<i>(Millions of Pounds)</i>
Guarantee Credit	2003/2004 published estimate	1,400
	2003/2004 revised estimate	1,110
Guarantee and Savings Credit	2003/2004 published estimate	1,820
	2003/2004 revised estimate	1,570
Savings Credit	2003/2004 published estimate	130
	2003/2004 revised estimate	110
<u>Take-Up Ranges</u>		<i>(Percentages)</i>
Guarantee Credit	2003/2004 published estimate	76 : 89
	2003/2004 revised estimate	72 : 87
Guarantee and Savings Credit	2003/2004 published estimate	71 : 80
	2003/2004 revised estimate	68 : 77
Savings Credit	2003/2004 published estimate	36 : 47
	2003/2004 revised estimate	33 : 43

**Table 2.2: 2003/2004 previously published and revised estimates of take-up for all pensioners**

<u>Total Amount Claimed</u>		<i>(Millions of Pounds)</i>
Guarantee Credit	2003/2004 published estimate	2,770
	2003/2004 revised estimate	2,480
Guarantee and Savings Credit	2003/2004 published estimate	2,520
	2003/2004 revised estimate	2,270
Savings Credit	2003/2004 published estimate	270
	2003/2004 revised estimate	260

## Data Sources

### The Family Resources Survey

The Family Resources Survey was used to analyse entitled non-recipients. During the financial year 2004/2005 the FRS interviewed 26,114 households in Great Britain. Households interviewed in the survey are asked a wide range of questions about their familial, social and economic circumstances. The structure and wording of the questionnaire, along with the advice given to interviewers, is continually under review. Further information on the design of the survey is contained in the FRS Report<sup>6</sup>.

### Administrative data

Pension Credit was introduced on 6 October 2003 and replaced Minimum Income Guarantee (Income Support for people aged 60 or over). The vast majority of people who were previously in receipt of MIG were transferred to Pension Credit in October 2003.

The administrative data source used to obtain the number of recipients was the Work and Pensions Longitudinal Study (WPLS). Since 27 October 2005, this has been DWP's key data source for many benefit statistics, including Pension Credit. This data source is used to produce headline National Statistics and is based on 100% of claimants.

To obtain a caseload estimate for the 2004/2005 financial year, an average was taken of the extracts at the end of May 2004, August 2004, November 2004 and February 2005. The true claim start date was used to obtain this caseload figure as it captures backdated claims. Therefore, the recipient count as published here includes all those pensioners who received Pension Credit in respect of 2004/2005, even if they received payment after 2004/2005. Published WPLS caseloads use the entitlement start date, which is the date the claim is recorded on the system; therefore, caseloads published by other sources will be lower than in this publication.

The 5% quarterly QSE data has been used to estimate the proportion of cases that are in non-private households and should therefore be excluded in order to derive the private household recipient population. These proportions were then applied to the WPLS data. This is because the WPLS data does not hold all the variables needed to perform these exclusions.

## Adjustments

As with previous publications, estimates of take-up cover only the private household population, since the Family Resources Survey (FRS) includes only those people who live in private households. In practice, this means these take-up estimates omit people living in Residential Care or Nursing Homes and some other, mostly small, groups. In addition, because the FRS does not contain sufficient information on the incomes of the self-employed to allow reliable assessment of benefit entitlement, the estimates also exclude the full-time self-employed, although this is a minor point for Pension Credit. A detailed explanation of these and other adjustments is given below. As a result of the various adjustments to the data, estimates in this publication may differ from those in other published sources.

### Annualisation of 2003/2004 Pension Credit figures

As Pension Credit was introduced part-way through 2003/2004, take-up rates estimated here cover only six months of 2003/2004, although the figures presented in this publication have been annualised to make it easier to compare with the 2004/2005 results. Consequently, the estimates of the total range unclaimed do not represent the actual amounts of unpaid benefit for PC over 2003/2004.

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<sup>6</sup> For more information about this publication please visit the following website: <http://www.dwp.gov.uk/asd/frs>

### Private Household Adjustment

Since the estimates rely on the FRS and administrative data sources, it is essential that the data from these sources cover, as near as possible, the same population. The FRS only covers private households, whereas administrative data contains information on all recipients of the benefit regardless of circumstances. To achieve the necessary consistency across the data sources, a number of cases in residential care or nursing homes were removed from the Pension Credit administrative data. A small number of asylum seekers, those without accommodation or with no fixed abode, people receiving urgent case payments and those staying in hospital long term (over 6 weeks) were also excluded.

### High eligible rents

A further adjustment was made to exclude those cases with very high rents. This avoids volatility in the estimate of ENR average amounts, due to outliers with large rents in the small ENR sample. Although there were very few such outliers, grossed up they would represent a significant amount of unclaimed benefit. In this way large variations in estimated expenditure take-up could result from the sampling process rather than from real changes in claimant behaviour.

To reduce such volatility, a high rent cut off was incorporated. This was set at the 99th percentile of eligible rent for each family type from the administrative data, which was then applied to the FRS ENRs in that family type. Cases with rent above this level were excluded from the take-up estimate.

### Grossing Up

The take-up statistics are all based on grossed up FRS data. The grossing system used is designed to make grossed estimates more accurate and reliable. The grossing scheme controls the population estimates of benefit units and households, taking into account variables like tenure and Council Tax Band as well as the age, sex and marital status variables. Since 2002, DWP statisticians, in consultation with other Government departments, have been reviewing the grossing methodology. Work on this is now completed and a new grossing regime, incorporating both revisions to the old grossing regime and the revised population counts based on post-census data, has been produced.<sup>7</sup>

This regime has been adopted for the production of figures shown in this publication. Details of the grossing regime are shown in the following table:

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<sup>7</sup> A press release with details of the new grossing regime was issued in February 2005, and is available at: <http://www.dwp.gov.uk/mediacentre/pressreleases/2005/feb/iad-170205-frs.pdf>

**Table 2.3: Control Variables used to generate grossing factors**

Variable	Groupings	Main Source of data
No. of individuals (Age, sex and Government Office Region)	Male children: 0-9, 10-19 Male adults: 16-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-59, 60-64, 65-74, 75-79, 80+ Female children: 0-9, 10-19 Female adults: 16-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-59, 60-69, 70-74, 75-79, 80+	Office for National Statistics (ONS), General Register Office for Scotland (GROS)
Families (England and Wales)	No. of families with children	DWP Child benefit data
Families (Scotland)	No. of families with children	DWP Child benefit data
Lone parents (Great Britain)	Male, female	DWP estimates
Tenure type (Households)	LA renters, private renters, owner occupiers	Office of the Deputy Prime Minister (ODPM), Scottish Executive, National Assembly for Wales (NAW)
Council Tax Band (Households)	A+NVS, B, C-D, E-H	Valuation Office, Scottish Executive
Region	London, Scotland, rest of Great Britain	ODPM, Scottish Executive

## Problems

### Backdating by pensioners from 6 October 2003

When Pension Credit was introduced in October 2003, the Pension Service decided that it would be introduced in a staged and managed fashion. This campaign activity was deliberately phased in order to maintain high levels of customer service as the caseload grew, and also to ensure that no-one lost out financially. This was done by allowing for extensive backdating of Pension Credit claims back to 6 October 2003 or by up to one year, depending on when the pensioner became eligible. For take-up figures, this means that there will be some benefit units that are identified as ENRs, but who later receive payment that covers the point of their FRS interview. In which case they could be considered to be an entitled recipient as opposed to an entitled non-recipient. We have been able to identify the number of pensioners who received a backdated amount in respect of 2004/2005 and have amended both our recipient count and our ENR count accordingly.

### Misreporting of capital holdings by pensioners

A 1998 follow-up survey of pensioner FRS interviewees indicated that a substantial proportion of elderly people declared their capital holdings inaccurately, in most cases underestimating their actual assets. Problems with establishing what savings pensioners hold are partly a cultural phenomenon, with savings being regarded

as a more private matter than income. But other obstacles include difficulties in recalling what assets are held, especially for those with a range of assets or whose finances were managed by their partner or another person. The DWP research report number 9 “Comparing Strategies for Collecting Information on Personal Assets”<sup>8</sup> pinpointed, through cognitive probing of a small number pensioners, strengths with existing asset questions in the FRS and weaknesses to which solutions were suggested. It also reported that there are inherent difficulties in any survey in collecting accurate information on personal assets amongst pensioners.

In 2001 the DWP commissioned the Office for National Statistics (ONS) and the National Centre for Social Research to undertake another survey of pensioners who appeared to be entitled non-recipients of Minimum Income Guarantee (the predecessor of Pension Credit). The results are published in the DWP research report no. 197 ‘Entitled but not claiming? Pensioners, the Minimum Income Guarantee and Pension Credit’<sup>9</sup>. Participants in the survey were drawn from people interviewed on the FRS between October 1998 and March 2001. Those selected were pensioners whose financial circumstances at the time of their FRS interview suggested that they were ENRs. On re-interview, a few respondents reported that they were in fact in receipt of Minimum Income Guarantee or Income Support at the time of their original FRS interview. For these respondents information on their savings and investments were not sought, as they were effectively ‘hidden’ recipients.

The study found that 17% of those classified as ENRs as a result of their original FRS interview were, at the time of re-interview, ineligible for Minimum Income Guarantee because of excess capital holdings. However, taking into account the possibility of changes in circumstances between the time of the original and the later re-interview, the minimum plausible proportion of pensioner ENRs that may have misreported the value of their savings and investments consistent with the results of the survey was 10% and a maximum was assumed at 14½%. These are the best estimates of the percentage of ENRs failing to report to the FRS capital holdings exceeding £8,000 (which was the capital threshold for MIG).

These assumptions were incorporated into the error analysis framework for MIG (described earlier). This was done by classifying the misreporting of capital by pensioners as over-statement of entitlement error – when a benefit unit that is not truly entitled to a benefit is calculated to be entitled by the analyst.

It is unlikely that the problem of misreporting of capital by pensioners was exclusive to Minimum Income Guarantee. Pension Credit has replaced the Minimum Income Guarantee, so under-reporting of capital by pensioners could have an impact on estimates of Pension Credit take-up. To overcome this, a similar adjustment was incorporated into the error analysis framework. However, given that Pension Credit has no upper limit to capital holdings this adjustment could not be identical to the one previously employed for MIG (as described above). The approach used was to simulate the effects of different reported capital amounts on random samples of initially modelled PC ENR cases and record the proportion of cases that changed from having a positive entitlement to no entitlement. The smallest allowance we made for this effect was to assume that capital was under-reported by a quarter among 10% of PC ENR cases. The upper bound to the adjustment allowance was to assume that under-reporting of capital by a half among 20% of PC ENR cases. The results of this simulation were then incorporated into the error analysis framework (described above) as part of the adjustment for over-statement of entitlement error.

### ‘Shortfall’ of reported Pension Credit recipients on the FRS

For many years the count of pensioner recipients of Income Support/Minimum Income Guarantee that is drawn from the FRS has fallen well short of the count from the Department’s administrative records. The latest available data for Pension Credit also shows a similar picture. Departmental records have very high degree of accuracy and therefore the shortfalls have raised questions regarding the quality of the survey count. There are

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<sup>8</sup> A copy of this report can be found at: <http://www.dwp.gov.uk/asd/asd5/WP9.pdf>

<sup>9</sup> *Entitled but not claiming? Pensioners, the Minimum Income Guarantee and Pension Credit* (2003) McConaghy, M. Hill, C. Kane, C. Lader, D. Costigan, P. and Thornby, M (ISBN 1 84 123 616 0) For a summary of this report see the following website: <http://www.dwp.gov.uk/asd/asd5/summ2003-2004/197summ.pdf>

two<sup>10</sup> possible reasons for a ‘shortfall’ in the number of Pension Credit recipients reported on the FRS. These are:

- The survey may be securing interviews from the right number of low-income pensioners, but some of these are not correctly identifying which benefits they are getting – e.g. someone receiving £72 Retirement Pension and £20 Pension Credit may report it as £92 Retirement Pension.
- The survey may be securing interviews from too few low-income pensioners, or the way in which the survey counts are grossed-up to national counts – the grossing regime – may yield too low a number of low-income pensioners. (The regime is designed to get the total number of pensioners correct.)

The first explanation would imply that we might be overstating the number of entitled non-recipients, because some of them are really ‘hidden’ recipients of Pension Credit. The second would imply we might be understating the number. Our uncertainty, as to the relative contribution of the two explanations accounts for a substantial portion of the width of the range of take-up estimates for Pension Credit.

In 2001 DWP commissioned the ONS to carry out an exercise to establish how many of the apparent ENRs in 2000/2001 were actually recipients of Minimum Income Guarantee at the time of the FRS interview, in order to help narrow the take-up range. The research compared pensioner cases modelled as ENRs with the Department’s benefit records. The process of datamatching that followed revealed several ‘hidden’ recipients of Minimum Income Guarantee but also helped to confirm the modelled status of entitled non-recipients for many cases. (Chapter 5 of ‘Income Related Benefits Estimates of Take-Up in 2000/2001’ contains further details of the exercise). Since this investigation the exercise of datamatching has been repeated every year since 2002/2003.

For the latest 2004/2005 Pension Credit results the ONS compared individual FRS respondents aged at least 60 years old with individuals contained on DWP Pension Credit (PC) and Retirement Pension (RP) benefit record extracts spanning the survey year and Winter Fuel Payments (WFP) data relating to February 2005. The benefit data for Pension Credit were fortnightly caseload ‘snapshots’ taken between March 2004 and May 2005. For Retirement Pension, the extracts were every 6 weeks between April 2004 and April 2005. The additional data on Retirement Pension and Winter Fuel Payments served to provide a benchmark for matching, as a high proportion of pensioners receive these compared to Pension Credit.

The matching of the survey data with administrative records was difficult as there was no unique variable common to both sources. National Insurance numbers contained on the administrative data allowed, in the first instance, benefit records to be combined. This helped to consolidate and verify information held on individual benefit claimants prior to the matching against survey data. The FRS does not collect National Insurance numbers from survey respondents. Given this, the ONS developed computer programs which sought data matches between the consolidated administrative dataset and the FRS data by a combination of the following criteria:

- *Postcode*; Exact match, First 4 characters match, no match
- *House number*; Exact match, no match
- *Surname*; Exact match, Partial match, no match
- *Forename*; Exact match, First character match, no match
- *Sex*; Exact match, no match
- *Age*; Exact match, +/-1 year match, no match

Together there were 324 possible matching combinations. Each FRS pensioner individual was assigned a match level that represented the most reliable data match against information held across benefit extracts. 92% of FRS

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<sup>10</sup> There is a third explanation where survey respondents are awaiting the outcome of a claim from the administrative authorities. If there are significant numbers of such cases, this would tend to suppress the numbers reporting receipt of the benefit at the point of FRS interview. However, such cases can be identified from the FRS and significant shortfalls still remain after these cases are accounted for.

pensioner respondents were matched against either Pension Credit, Retirement Pension or Winter Fuel Payments records.

By inspecting the different match types, DWP analysts judged that there were 30 different match levels that were likely to deliver reliable person level matching, particularly in relation to considering data matches against Pension Credit extracts. A further 40 matching combinations were identified as ‘good’ data matches, but the chance of matching a wrong person could not be ruled out. It is mainly on the former group of matches that the subset of FRS pensioners that were modelled as ENRs of Pension Credit was examined further.

In total, two thirds of apparent ENRs of Pension Credit were matched (according to the reliable match categories) against the combined administrative data of PC, RP and WFP. If the additional (less certain) 40 match categories are included, the percentage datamatching on any benefit extract rises to around 90 per cent. 36% of reliably datamatched apparent PC ENRs were, at some point in time during the April 2004 and March 2005, claiming Pension Credit.

Data matches of specific interest are those as close as possible to the FRS date of interview. Pension Credit ENR cases that were found on respective records either some time before or some time after their FRS interview would not necessarily mean that they were incorrectly assigned ‘ENR’ status. In the former situation, a claimant in a pensioner couple may have passed away and the spouse had yet to renew the claim under his or her name. In the latter case, pensioners may apply for PC after their FRS interview date. If a claim spell (given by the claim start date and claim end date) included the date of the FRS interview, then it was almost certain that the apparent ENR was ‘hidden’ recipient of Pension Credit at the time of the FRS interview.

Paying special attention to these cases, Table 2.4 shows the proportion of ENRs who were identified as ‘hidden’ recipients. The datamatching exercise also uncovered significant numbers of apparent non-entitled non-recipients of the benefit on the fortnightly PC extracts at the time of the FRS interview; these are also presented in the table.

**Table 2.4: Percentage of datamatched entitled non-recipients and non-entitled non-recipients of Pension Credit who were ‘hidden’ recipients, 2004/2005**

	‘Hidden’ recipients among datamatched ENRs	‘Hidden’ recipients among datamatched non-entitled non-recipients
Pensioner Couples	(22 : 23)%	(1 : 2)%
Single Male Pensioners	(40 : 42)%	3%
Single Female Pensioners	41%	(3 : 4)%
All Pensioners	34%	2%

The above information was incorporated into the error analysis framework by considering the extent to which the numbers of ‘hidden’ recipients amongst the apparent pensioner ENRs and non-entitled non-recipients accounted for the ‘shortfall’ between the total number of grossed recipients of Pension Credit reported on the FRS and the respective count from DWP administrative records. The remainder of any ‘shortfall’ was attributed both to the effect of backdating and to grossing inaccuracies.

Table 2.5 shows estimates of take-up of Pension Credit before and after datamatching validation. There are significant differences between results; estimates post-datamatching are regarded as more accurate and more precise.

**Table 2.5: Caseload take-up of Pension Credit with/without incorporating results from datamatching against PC/RP/WFP benefit records**

	Pensioner Couples	Pensioner Single Males	Pensioner Single Females	All Pensioners
2004/2005 'standard' estimate	44% : 55%	51% : 66%	54% : 67%	51% : 63%
2004/2005 estimate post-datamatching	53% : 61%	60% : 71%	65% : 73%	61% : 69%

Note: Estimates are presented with 95% confidence intervals to take account of sampling variation.

By excluding Pension Credit 'hidden' recipient cases from the initial estimate of the number of entitled non-recipients, the datamatching findings allowed estimates of the baseline average and median weekly amounts unclaimed to be revised. Table 2.6 shows the results for PC on this basis. Estimates tend to be lower post-datamatching.

**Table 2.6: Average and median weekly amounts unclaimed of Pension Credit with/without incorporating results from datamatching against PC/RP/WFP benefit records**

	Pensioner Couples	Pensioner Single Males	Pensioner Single Females	All Pensioners
<i>Average Weekly Amounts Unclaimed, £s</i>				
2004/2005 'standard' estimate	28.5	23.2	23.4	25.0
2004/2005 estimate post-datamatching	27.5	21.1	21.0	23.4
<i>Median Weekly Amounts Unclaimed, £s</i>				
2004/2005 'standard' estimate	15.3	14.2	16.4	15.7
2004/2005 estimate post-datamatching	14.9	13.4	15.7	14.9

#### Modelling of the overlap between Jobseeker's Allowance and Pension Credit

Men over 60 but under 65 could claim either Pension Credit or Jobseeker's Allowance (Income-Based) in 2004/2005. For those who had an underlying entitlement to both of these benefits we cannot determine which one they might have claimed. In practice we know that the vast majority of these cases would have claimed Pension Credit; so, for the purposes of estimating take-up we have made the assumption that men over 60 but under 65 would have claimed PC rather than Jobseeker's Allowance, if they have reported receipt of neither.

#### Dealing with those awaiting the outcome of a claim for benefit

When a person claims benefit there is often a delay between the date of the claim and the date they receive a decision on their claim. This causes problems when estimating the number of ENRs. The FRS asks respondents whether or not they are awaiting the outcome of a claim. If a person says that they are not receiving Pension Credit at the time of their FRS interview, but we model them as entitled, they are initially classified as an ENR. This may be false in cases where the FRS respondent is awaiting the outcome of an eventually successful claim. In reality the respondent was actually in receipt in respect of the time of the FRS interview, and should not be classified as an ENR. The existence of these 'pipeline' cases tends to depress the baseline estimate of take-up below its true level. We make an assessment about the proportion of these non-recipients who are likely to be

## Methods and Data Sources

successful in their claim, and then incorporate these cases into the error analysis framework, by assuming they contribute to the under-reporting of benefit receipt. The effect of this is that it tends to shift the take-up ranges upwards.

## Construction of take-up ranges

### Introduction

Chapter 2 explains in broad terms how estimates of take-up are calculated. This Appendix goes into rather more detail. It begins by re-capping the sources of error that can affect the baseline estimates of take-up. It subsequently describes in some detail, how we estimate the size of these errors; describes the additional assumptions required to obtain unambiguous estimates of take-up; presents an example of how all this works in practice; and closes with some observations about the general effects of the different assumptions.

### The five sources of error

Chapter 2 described the five potential sources of error that can introduce bias into estimates of take-up. To reiterate they are:

- Over-statement of entitlement to benefit – known as Error A;
- Under-reporting of benefit receipt – known as Error B;
- Under-statement of entitlement to benefit – known as Error C;
- Inaccurate grossing-up – known as Error D;
- Payment of benefit to non-entitled benefit units – known as Error E.

The formula used for calculating caseload take-up – first presented in Chapter 2 – shows that we take our count of benefit recipients direct from DWP administrative records; so it cannot be affected by any of the errors A to D listed above. The administrative counts will include some people who are not actually entitled to receive benefit, non-entitled recipients (NERs), and thus this data can be affected by error E. However, this error is disregarded and not introduced into our results because the DWP definition of take-up allows for non-entitled benefit units to be included in the recipient count. So the accuracy of the recipient count we use is not affected by any of the errors listed above.

However all five errors affect the accuracy in our estimation of the number of entitled non-recipients (ENRs). To correct this estimate it is necessary to estimate the size of errors A to E. Once this is done we can then adjust the initial estimate of the number of ENRs to give us an unbiased estimate of the true figure. Combining this with the recipient count we can arrive at an unbiased estimate of the take-up rate.

In an ideal world the exact size of the errors A to E would be known. This would enable us to fully and unambiguously correct for them and publish a single unbiased point estimate of true take-up. Unfortunately we only have subjective estimates about the likely size of each error. This means in most cases we have to assume that each error could be as high as say X or as low as say Y. Assuming high and low values for the size of each error results in high and low estimates for true take-up. It is these high and low estimates that constitute the range estimate that we publish.

## Estimating the size of the errors

We only have a rough idea about the size of errors A to E because the evidence available to us is often ambivalent and scarce in nature. The main evidence we consider is the following two statistics:

- the percentage of grossed-up FRS recipients modelled as not entitled. We refer to this as ‘s’ and it can be written as the number of non-entitled recipients (NERs) in the FRS divided by the number of recipients of the benefit in the FRS:

$$s = \frac{NER_{FRS}}{R_{FRS}}$$

- the ratio of the grossed-up FRS count of recipients to the administrative count of recipients. We refer to this as ‘t’ and it can be written as:

$$t = \frac{R_{FRS}}{R_{admin}}$$

### Clues provided by ‘s’

We estimate the number of ENRs using the FRS. The FRS contains detailed information about household composition, income, employment and savings. Using this information we mimic the benefit rules and estimate whether or not a benefit unit is entitled or not entitled to receive the benefit; this process is known as modelling entitlement. The ‘s’ statistic is affected by errors in modelling entitlement and by the receipt of benefit by non-entitled people. The more modelling error there is, the larger ‘s’ will be. The more NERs there are, the larger ‘s’ will be. Though not conclusive, ‘s’ gives us useful clues about the likely size of errors A, C and E.

Modelling errors A and C arise where we are unable to accurately assess a benefit unit’s true entitlement because we do not have a full picture of their relevant circumstances. This can happen for a number of reasons. Firstly, whilst the FRS contains a large amount of detail relevant to calculating benefit entitlement, it does not necessarily contain all the detail required. Also respondents, for whatever reason, may not provide us with fully accurate accounts of their circumstances. With imperfect data, there are bound to be some errors in identifying which benefit units are entitled to a benefit. In the absence of any evidence to the contrary, errors A and C are assumed to be symmetrical in size. We shall take a look at the other evidence we use to consider whether or not this assumption is valid later in the text. Even when we assume errors A and C are of equal size, their effects are unlikely to cancel out because error A will typically add more to the count of ENRs than error C subtracts from it. So it is important to estimate the size of errors A and C.

If ‘s’ is, say, 10% then this could imply that there are substantial modelling errors. Alternatively, modelling errors might be small and the 10% value for ‘s’ might mainly reflect receipt of benefit by people not truly entitled. To get over this ambiguity we assume the first scenario when setting the upper limit for error C (and by assumption error A, when other evidence suggests the errors are equally likely). So the upper limit is set at s%. This is adjusted by including the maximum allowance for capital misreporting. We set the lower limits for errors A and C to (s/2)% plus the minimum allowance for capital under-reporting. We do not set the lower limits to zero because it seems unlikely that A and C could ever be zero.

An important point to note here is that the assumptions we use for the upper and lower limits of each error do not go to the extreme bounds of plausibility. However, wide ranges are used where the available evidence suggests that there is a wide range of plausible assumptions.

The size of error E is determined in a similar way to errors A and C, in that it uses the size of the s-statistic, with two exceptions. The first is that the upper limit is capped at 15% because it seems unlikely that the proportion

of recipients not entitled to benefit could exceed 15%. Secondly, error E makes use of the knowledge that the estimated fraud and error between October 2003 and September 2004 for PC was around 5%<sup>11</sup>. So, the lower limit was set at 5% and the upper limit was set at (s+5)%.

### Clues provided by 't'

The 't' statistic provides some evidence about the likely size of errors B and D, the under-reporting of benefit receipt and grossing errors respectively. If we knew our grossing-up was perfect then a 't' of less than 100% would provide a strong indication of the size of error B. Conversely, if we knew that under-reporting was unlikely, then a 't' of less than 100% would provide strong evidence of the size of error D.

In practice it is possible that both sources of error will occur simultaneously. So 't' may reflect both under-reporting and grossing problems. It should also be remembered that even if we knew that under-reporting did not occur for a particular group, the value of 't' itself would only be an indicator of the impact error D has on the number of ENRs. Because 't' is a measure for recipients, it cannot be assumed that it gives an accurate indication of the size and direction of errors in grossing-up the number of ENRs. Assumed upper and lower limits for error D do not reflect the size of the error in the population, but the likelihood of the error generating an inaccurate count of ENRs.

A further complication is that, even if we knew grossing was not a problem and we attributed a low value of 't' to under-reporting, this under-reporting would not necessarily introduce a large error in the estimate of the number of ENRs. This is because benefit units not reporting receipt of benefit will only appear to be entitled if they also report too low a total income. If all that happens is they, for example, misreport their Pension Credit as Retirement Pension, and so the correct total income is reported, they will not be falsely classified as ENRs.

In setting the upper limit for the size of error B we need to make an assumption about the percentage of under-reporting cases that will generate false ENRs. We do this by calculating the proportion of recipients on the FRS who are modelled to be entitled to more than they report receiving. This 'over-modelling' could be due to under-reporting of the benefit amount or our failure to accurately mimic the benefit rules, alternatively it could be due to under-reporting of total income. This last reason is the condition that needs to be in place alongside failure to report receipt, in order to generate a false ENR case. So the percentage of FRS recipients 'over-modelled' gives an indication of the upper limit of the proportion of benefit units failing to report receipt who would also be modelled as entitled and therefore falsely classified as ENRs. This is another example where our assumptions about errors do not go to the extreme bounds of plausibility.

Chapter 2 describes how we use information in the FRS about outstanding benefit claims to assess the extent to which under-reporting of benefits is due to people awaiting the outcome of a claim for benefit. In practice we express the number of cases awaiting the outcome of a claim and who appear to be entitled, as a percentage of the administrative data recipient count. We also express the number of backdaters as a percentage of the administrative data recipient count. We then add these estimates to the value of 't' before working out the size of the upper limit of error B. This is done because we don't consider these 'pipeline cases' or eventual backdaters as genuine ENRs – they have already submitted a claim, or will go onto receive Pension Credit in respect of 2004/2005.

In setting the lower limit for error B we assume that there is no under-reporting of benefit except that represented by the 'pipeline case', 'backdaters' and 'hidden recipients' percentages.

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<sup>11</sup> *Fraud and Error in Pension Credit from October 2003 to September 2004 (2005)* Rees, J. and Taverner, J. This report can be found at: [http://www.dwp.gov.uk/asd/asd2/pc\\_fraud\\_headline\\_report\\_oct03\\_sep04.doc](http://www.dwp.gov.uk/asd/asd2/pc_fraud_headline_report_oct03_sep04.doc)

## Appendix

So a low value of ‘t’ may reflect some or all of the following:

- under-grossing – error D;
- backdaters who later go on to receive a Pension Credit claim – error B;
- under-reporting generating false ENRs – error B;
- under-reporting NOT generating false ENRs;
- pipeline cases generating false ENRs – error B.

The interaction between errors B and D is difficult to disentangle, therefore we must come to judgements about the likelihood of there being an under-reporting or grossing problem.

For high values of ‘t’ we must also allow for the possibility that we have over-grossed the estimate of ENRs. For values of ‘t’ that are close to 100% we make the assumption that under-reporting, under-grossing and over-grossing all may have occurred. For values of ‘t’ that are significantly higher than 100% the assumptions are simplified; we assume no possibility of error B or of under-grossing. We also assume that there is no possibility of over-reporting benefit receipt.

Finally we check that the assumed level of error B is consistent with the uncorrected/crude measured level of take-up. Without this check it would not be possible to assume a level of error B which could occur given the estimated number of ENRs.

Tables 1 to 3 summarise the assumptions we make about the upper and lower limits of the sizes of errors B and D. Note that under-grossing assumptions are labelled D1 and over-grossing assumptions are labelled D2. Note also that outstanding claims cases are labelled as ‘pipeline %’.

**Table 1: Values/ranges of error B**

	<b>Error B</b>	
<b>Size of pipeline and HR adjusted ‘t’</b>	<b>Lower limit</b>	<b>Upper limit</b>
All values	Pipeline% + backdater% + min(hidden recipient%)	Pipeline% + backdater% + max(hidden recipient%)

**Table 2: Values/ranges of error D1**

<b>Error D1</b>		
<b>Size of Max/Min Pipeline adjusted 't'</b>	<b>Lower limit</b>	<b>Upper limit</b>
< 95%	$Y\% * (100 - (\max(\text{pipeline, back and HR adjusted t})))\%$	$100 - (\min(\text{pipeline, back and HR adjusted t}))\%$
95% - 100%	0%	$100 - (\min(\text{pipeline, back and HR adjusted t}))\%$
100% - 105%	0%	5%
105% and over	0%	0%

Where Y = proportion of the difference between the administrative data count of recipients and the FRS count of recipients.

**Table 3: Values/ranges of error D2**

<b>Error D2</b>		
<b>Size of Min/Max Pipeline adjusted 't'</b>	<b>Lower limit</b>	<b>Upper limit</b>
< 95%	0%	0%
95% - 100%	0%	5%
100% - 105%	0%	$(\max(\text{pipeline, back and HR adjusted t})\% - 100)\%$
105% - 110%	0%	$(\max(\text{pipeline, back and HR adjusted t})\% - 100)\%$
110% and over	$(\min(\text{pipeline, back and HR adjusted t})\% - 100)\%$	$(\max(\text{pipeline, back and HR adjusted t})\% - 100\% + 2.5\%)$

### **Asymmetry of errors A and C**

Earlier it was mentioned that in the absence of any evidence to the contrary we assume that errors A and C are symmetrical in size. This section describes the evidence we use to determine whether or not A and C are in fact asymmetrical in size.

The main analytical tool we use is a comparison of modelled entitlement to reported receipt for those benefit units reporting receipt on the FRS. We work out the proportion of cases we model as entitled to more than they report receiving – this is termed ‘over-modelling’. We also work out the proportion of cases we model as entitled to less than they report receiving – this is known as ‘under-modelling’. We assume that errors A and C are asymmetrical in size for any group where there is a greater than ten percentage points difference between ‘over-modelling’ and ‘under-modelling’. However we only adjust our assumptions for the upper and lower limits of A and C where the s statistic is above 10%, for it is only above this level that we believe asymmetry in the size of A and C will have a significant impact upon estimated take-up. We have not used any asymmetrical assumptions in the calculation of entitlement for any family types in this current publication, either for 2003/2004 or 2004/2005, since the s statistic did not exceed 10% in either of these years.

### **The need for judgement**

From the discussion so far it is clear that setting plausible ranges for errors A to E is a complex exercise that involves analytical judgement because we have no objective way of measuring the size of the errors. In some situations, evidence may lead us to depart from the error framework described above.

### **Additional assumptions required**

Once the upper and lower limits are decided for each of the errors A to E, the team need to make some additional assumptions in order to calculate unambiguous corrected take-up figures.

Firstly we need to make an assumption about the level of true take-up in cases affected by error C. This is important because, if we assumed take-up was zero for these cases, it would imply a large number of cases were falsely classified as not entitled due to ‘under-modelling’ of entitlement. This would mean we were assuming a large downward bias in our baseline estimate of ENRs due to error C. If on the other hand we assumed take-up was 100% for these cases, it would imply that no cases were falsely classified as not-entitled due to ‘under-modelling’. This would mean we were assuming no downward bias in our estimate of ENRs due to error C. We label this additional assumption error ‘a’.

Secondly we need to make an assumption about the level of true take-up amongst cases affected by error A. This is important because, if we assumed take-up was zero for these cases, it would imply a large number of cases falsely classified as ENRs due to ‘over-modelling’ of entitlement. This would mean we were assuming a large upward bias in our baseline estimate of ENRs due to error A. If on the other hand we assumed take-up was 100% for these cases, (seems unlikely unless there were large amounts of fraud/mistakes) it would imply that there were no cases falsely classified as ENRs due to ‘over-modelling’. This would mean we were assuming no upward bias in our estimate of ENRs due to error A. We label this additional assumption error ‘b’.

Again, judgement is required when setting the levels of these take-up rates and in practice these assumptions are given upper and lower limits.

The final step is to bring all of these assumptions about errors and take-up rates in the presence of errors together in two combinations: one that gives us maximum take-up rate and one that gives us a minimum take-up rate. Table 4 summarises the appropriate combinations.

**Table 4: Error combinations that yield the maximum and minimum limits for true take-up**

<b>Error</b>	<b>For minimum true take-up</b>	<b>For maximum true take-up</b>
A	Lower	Upper
B	Lower	Upper
C	Lower	Upper
D1	Upper	Lower
D2	Lower	Upper
E	Upper	Lower
'a'	Lower	Upper
'b'	Upper	Lower

One of the things to note from Table 4 is that we combine the upper limit for error A with the upper limit for error C when solving for maximum true take-up and the lower limit for both A and C when solving for minimum true take-up. This may not seem intuitive, given the preceding discussion. However, we make an additional assumption that these are the only plausible combinations of these errors, modelling error is either very likely (upper limits for A and C), or not very likely (lower limits for A and C).

## An example

The following section explains how the above methodology was used to produce a range of true take-up of Pension Credit by single female pensioners in 2004/2005. Single female pensioners' take-up of Pension Credit has been chosen as it is one of the more straightforward statistics in this publication to calculate.

The initial step in estimating take-up is to collect the administrative data on the number of single female recipients and the average amount they receive. Next the Family Resources Survey (FRS) is analysed to give estimates of the number of entitled non-recipients (ENRs) and the average amount they leave unclaimed. We can then combine these figures to produce the baseline estimates of take-up. In 2004/2005 the baseline estimates for single females' take-up of Pension Credit were as follows:

Administrative data	Family Resources Survey data
Recipients = 1,485,675	Entitled non-recipients =972,834
Average weekly receipt =£37.71	Average weekly unclaimed =£23.38
	Non-entitled recipients =18,891
	Recipients =963,571
Baseline caseload take-up = $1,485,675 / (1,485,675 + 972,834) = 60\%$	
Baseline expenditure take-up = $(1,485,675 * £37.71) / (1,485,675 * £37.71 + 972,834 * £23.38) = 71\%$	

The next step is to assess the likely extent of the errors that might have distorted these baseline estimates. As explained earlier in this Appendix, this is done in part by examining the values of 's' and 't': where 's' is the proportion of grossed-up FRS recipients modelled as not entitled and 't' is the grossed-up number of FRS recipients divided by the count of recipients from the administrative data. For Pension Credit and single female pensioners in 2004/2005, 's'=2.0% (18,891/963,571) and 't'=64.9% (963,571/1,485,675).

In addition, the number of single female pensioners who had submitted a claim for Pension Credit, were awaiting the outcome of this claim and appeared to be entitled at the time of their FRS interview (pipeline cases) represented 3.0% of the administrative data count of single female recipients. It was found that a further 5.0% of the administrative recipient count were in fact backdaters. And, after data matching was carried out, the proportion of the administrative count found to be ENR hidden recipients was between 14.6% and 20.3%. Further to this, between 1.5% and 3.2% of the administrative count were modelled by us as being not entitled and not receiving but were found by data matching to actually be in receipt of Pension Credit. These errors were incorporated into the t-statistic to obtain a minimum adjusted 't' of 89.0% (64.9% + 3.0% + 5.0% + 14.6% + 1.5%) and a maximum adjusted 't' of 96.4% (comprised of 64.9% + 3.0% + 5.0% + 20.3% + 3.2%).

It is now possible to assess the extent of errors A to E. Since 's' for single female pensioners is well below 10%, the general assumptions of a lower limit of (s/2)% and an upper limit of (s)% can be followed for A. It is here that we also adjust error A for the effect of capital misreporting. We estimate that the addition to the s-statistic

accounting for the potential affect of capital misreporting is between 0.2% and 0.7% of single female pensioners. Adding these estimates to the initial estimates of error A gives a minimum error A of 1.2% (2%/2 plus 0.2%) and a maximum of 2.7% (2% plus 0.7%). Since these limits are very small this is going to give a small adjustment to the baseline estimate for modelling error.

Error C is used to estimate the extent of under-statement of entitlement to the benefit, and again, the size of the 's' statistic can be used to determine the likely upper and lower limits of error C. Here we use the general assumptions of a lower limit of  $s/2\%$  and an upper limit of  $s\%$ , and hence 1% and 2% respectively in the case of single female pensioners.

The size of error E is determined in a similar way to errors A and C, in that it uses the size of the s-statistic. However, error E makes use of the knowledge that the estimated fraud and error in between October 2003 and September 2004 for PC was around 5%<sup>12</sup>. So, the lower limit was set at 5% and the upper limit was set at 7% (2+5)%.

The value of 't' gives us clues about the size of errors B and D, the under-reporting and grossing errors respectively. Tables 1-3 presented earlier on in this appendix show the general approach to setting the levels of errors B and D. For 2004/2005 there were a number of single female pensioners who had claimed Pension Credit at the time of their FRS interview and were awaiting the outcome of those claims, known as pipeline cases, which amounted to 3.0% of the administrative data count. It was also found that 5.0% of the administrative count were backdaters of Pension Credit. As the pipeline, backdater and hidden recipient adjusted 't' statistics are both less than 100% we assume that for under-reporting error, error B, both the bottom and top end of the error range emanates from the sum of the pipeline, hidden recipient and backdated cases. That is, we assume that the shortfall in the adjusted t statistic, compared to 100%, is due to these three factors.

As both the minimum and maximum pipeline and hidden recipient-adjusted t-statistics are less than 100% but the maximum is greater than 90% we must consider both the possibility of under-grossing and over-grossing of ENRs.

Table 2 shows the general rule we use for setting the upper and lower limits of error D1 (under-grossing). We assume that the lowest plausible assumption for error D1 is  $Y\% \times (100 - \text{maximum pipeline, pipeline and hidden recipient-adjusted t-statistic})$ . This means that the lower limit for D1 is 1.8%. For the upper limit we assume that the error for under-grossing can be no larger than  $(100 - \text{minimum pipeline, backdater and hidden recipient-adjusted t-statistic})$  so the upper limit is set at 11.0%. For the lower limit of D2, we assume that there could be no over-grossing, so setting it to 0%. There could also be a chance that our initial count of ENRs has been over-grossed; we assume a maximum limit, given the size of the maximum adjusted t statistic, of  $((\text{maximum pipeline, backdater and hidden recipient-adjusted t-statistic} - 100)\% + 10\%)$  to make 6.3%.

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<sup>12</sup> *Fraud and Error in Pension Credit from October 2003 to September 2004 (2005)* Rees, J. and Taverner, J. This report can be found at: [http://www.dwp.gov.uk/asd/asd2/pc\\_fraud\\_headline\\_report\\_oct03\\_sep04.doc](http://www.dwp.gov.uk/asd/asd2/pc_fraud_headline_report_oct03_sep04.doc)

To summarise, the upper and lower limits of errors A to E for single female pensioners of Pension Credit are:

	<b>Lower limit</b>	<b>Upper limit</b>
<b>Error A</b>	1.2%	2.7%
<b>Error B</b>	22.6%	28.3%
<b>Error C</b>	1.0%	2.0%
<b>Error D1</b>	1.8%	11.0%
<b>Error D2</b>	0.0%	6.3%
<b>Error E</b>	5.0%	7.0%

The final step is to set levels for take-up by those affected by error A ('b') and take-up by those affected by error C ('a'). 'a' is set relative to the assumed level of true take-up and 'b' is set relative to 'a' such that 'b' is always smaller than 'a'. This is because we expect take-up by those truly not-entitled but modelled as entitled ('b') will be lower than take-up by those truly entitled but modelled as not entitled ('a'). We set different levels for these assumptions depending upon whether we are calculating the upper end of the true take-up range or the lower end of the true take-up range.

With all the assumptions set it is then possible to calculate an adjusted caseload take-up rate using any combination of the assumptions together with the baseline take-up rate. Table 4 summarises the combinations of assumptions that give the lowest plausible estimate of true take-up and the highest plausible estimate of true take-up.

To produce the highest plausible estimate of true take-up, errors A, B, C and D2 were set to their upper limits, errors D1 and E were set to their lower limits, 'a' was set to its lower limit and 'b' to its upper limit. In practice this means setting A at 2.7%, error B at 28.3%, error C at 2.0, error D1 at 1.8%, error D2 at 6.3%, error E at 5.0%, 'a' at 60.0% and 'b' at 5.0% to give a plausible upper limit to take-up of 73%.

To produce the lowest plausible estimate of true take-up, errors A, B, C and D2 were set to their lower limits, errors D1 and E were set to their upper limits, 'a' is set to its upper limit and 'b' to its lower limit. In practice this means setting A at 1.2%, error B at 22.6%, error C at 1.0, error D1 at 11.0%, error D2 at 0.0%, error E at 7.0%, 'a' at 30.0% and 'b' at 20.0% to give a plausible lower limit to take-up of 66%.

Finally a range of true expenditure take-up estimates is calculated using the estimates of average claimed and unclaimed amounts, combined with the upper and lower bounds of true caseload take-up. This calculation also uses an estimate of the mean amount unclaimed that excludes those hidden recipients that were found as a result of the data matching exercise. This means the lower bound for true expenditure take-up is  $66 * \text{£}37.71 / ((66 * \text{£}37.71) + (34 * \text{£}21.03))$  i.e. 77%; and the upper bound is  $73 * \text{£}37.71 / ((73 * \text{£}37.71) + (27 * \text{£}21.03))$  i.e. 83%.

Before allowance for the effects of sampling error, the range of true caseload take-up of Pension Credit for single female pensioners in 2004/2005 is between 66% and 73%. After allowing for the effects of sampling error, the range of true caseload take-up for this group is 65% to 73%.

## The relative importance of different assumptions

Because of interactions between the errors it is not possible to fully attribute each error with its part in the overall adjustment of the take-up rate from the baseline estimate to the estimate of true take-up. However, it is possible to make a number of general points.

Errors A and C have their greatest impact on the estimated upper limit of true take-up. This is down to the fact that we fully expect take-up by those falsely estimated to be entitled to Pension Credit to be lower than take-up by those falsely estimated to be not entitled to Pension Credit (hence our assumption for 'a' is always larger than our assumption for 'b'). So, despite the fact that in most cases our assumptions about the overall chances of A and C occurring are symmetrical, we assume that error A has the greatest effect on the baseline take-up estimate. This difference is accentuated for higher levels of A and C, and it is these higher levels that we assume when estimating the upper limit for true take-up.

Error B also has its greatest impact on the estimated upper limit of true take-up. This is simply because error B inflates the baseline estimate of entitled non-recipients above its true level so the appropriate correction for this is to adjust the number of ENRs downwards when calculating true take-up. The larger the assumption we use for error B, the larger the downward adjustment to the ENR count we will make and hence the higher we will push our estimate of true take-up.

Error D has much less impact on the results. A given percentage error in grossing-up the baseline estimate of ENRs will have its greatest impact when the ENR estimate is relatively large, i.e. when true take-up is relatively low. So the greatest effect of error D will be on the lower limit of true take-up. In the example described above, the assumptions for error D have little impact on the final estimates because the baseline estimate of take-up is very high.

Assumptions on the receipt of Pension Credit by non-entitled people have little impact overall since error E only comes into play indirectly in combination with the other errors. For example error E will reduce the impact of error A on the baseline estimate of take-up since those who receive benefit when they are truly not entitled cannot be falsely added to the estimate of entitled non-recipients.



## **Pension Credit Estimates of Take-Up in 2004/2005**

This publication contains information on the take-up of Pension Credit in Great Britain in 2004/2005.

The report brings together information from DWP benefit records and the Family Resources Survey to provide estimates of take-up of Pension Credit among the pensioner population in private households in 2004/2005.

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