

**Fraud and Error in Income Support,
Jobseeker's Allowance and
Pension Credit
April 2005 to March 2006**

Technical Appendix

INFORMATION DIRECTORATE

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This report is available on the internet at:

www.dwp.gov.uk/asd/asd2/fraud_error.asp

ISBN: 978-1-84763-192-3

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1. Introduction

Background

- 1.1 This technical appendix is a companion volume to 'Fraud and Error in the Benefit System April 2005 to March 2006: Spending Review 2004 target baseline'. It gives background to the fraud and error measurement methodology for Income Support (IS), Jobseeker's Allowance (JSA) and Pension Credit and details of changes made to the measurement of these benefits in 2005/06. The descriptions of methods and quality issues relate to the whole series of estimates under Spending Review 2004 (SR04). The Spending Review set a target for a reduction in the proportion of IS and JSA expenditure being overpaid through fraud and error between 2005/06 and 2009/10.
- 1.2 The previous IS/ JSA methodology dates back to 1997/98. Experience of measurement over this period has led to the identification of areas for improvement. However, with the SR02 measurement having been baselined in 1997/98 and running up to March 2006, it was not possible to make changes that would have interrupted the possibility of measuring progress against the target over this period.
- 1.3 The setting of a new PSA target for IS and JSA under SR04 has provided the opportunity for a number of improvements to be introduced from the start of the new target period and it was agreed with HM Treasury to have a new baseline in 2005/06.
- 1.4 Similarly, the SDA target for Pension Credit also ended in March 2006. Although no new SDA target was set under SR04, improvements were made to Pension Credit fraud and error measurement at the same time, both to improve the global estimate of fraud and error across all benefits and to maintain consistency of measurement across benefits.

Structure

- 1.5 This report consists of the following sections:
 - Section 2 describes the IS, JSA and Pension Credit methodology from sample selection through to interview.
 - Section 3 describes the changes made to measurement methodology to coincide with the rebaselining of fraud and error measurement for IS and JSA in 2005/06.
 - Section 4 discusses data quality and compliance with the IS, JSA and Pension Credit fraud and error measurement processes.

- The tables show the derivation of results for 2005/06 using the new measurement methodology.
- 1.6 The main report includes the tables of headline results and a summary of the main findings.
- 1.7 All reports on this subject can be accessed on the internet at:

www.dwp.gov.uk/asd/asd2/fraud_error.asp

2. IS, JSA and Pension Credit Fraud and Error Measurement Methodology

- 2.1 This section provides details of the main parts of the fraud and error measurement methodology for IS, JSA and Pension Credit. This is included as background to the introduction of improvements to the methodology.

Sample selection

Working Age

- 2.2 IS and JSA cases were selected from each of the 70 Jobcentre Plus organisational districts, three times in the year. The IS sample was split between two claimant groups, Lone Parents and Disabled/ Others, while the JSA sample comprised a random selection of JSA (IB) and JSA (Conts) cases.
- 2.3 IS cases were randomly selected across all sites within a district, while the JSA sample was clustered. Two sites were selected from each Jobcentre Plus district on each of three occasions in the year and then the JSA sample was selected from within the two sites.
- 2.4 Cases for the working age sample were selected randomly on a monthly basis from the General Matching Service (GMS) administrative data source. The samples were taken from GMS five weeks in advance of the visiting month to give time for the sample to be checked and for background information to be gathered on each case.
- 2.5 A supplementary sample of more recent JSA claims were randomly selected on a monthly basis from Audit Trail Analysis Systems (ATAS) administrative data source two weeks before each visit. The cases were selected from a single site within each district. The purpose of this supplementary sample is to address a known under-representation in the sample of JSA cases that are visited in their first few months of claiming.
- 2.6 Nationally for 2005/06 this resulted in 14,337 IS cases, 9,317 JSA cases from GMS and 1,194 more recent JSA cases from ATAS being checked for official

error. The number of cases checked for customer error or fraud across the year were 12,079 IS cases, 5,673 JSA cases from GMS and 743 JSA cases from ATAS.

- 2.7 The populations from which both the working age and the pension age samples are drawn are the groups of all cases that are live at some point in a four week sample period. The selection of cases from this population means that the chances of selecting a case in the last week of their claim are artificially increased relative to their frequency in the population.

Pension Age

- 2.8 For Pension Credit, cases were selected from each of the 101 offices that make up the Pension Centres three times in the year. The sample was drawn on a monthly basis from GMS. Nationally for 2005/06, this resulted in 7,939 Pension Credit cases being checked for official error and 7,090 cases being checked for customer error or fraud across the year.

Review Process

Official error checking

- 2.9 Cases are checked for official payment errors in the period the sample is drawn, known as the sample period.
- 2.10 Specially trained DWP benefit review officers from a part of the Risk Assurance Division known as Performance Measurement (PM) carried out the checks. Examinations were made of the claimant's case papers and DWP computer systems to ensure the claimant was receiving the correct amount of benefit according to their presented circumstances. This served to identify any errors made by DWP officials in processing the claim and to prepare for the visit by highlighting where there may be claimant fraud or error.
- 2.11 Outstanding doubts about the customer's circumstances were followed up either at the customer interview or by the district office or Pension Centre.

Fraud and customer error reviewing

- 2.12 DWP benefit review officers normally check for customer error or fraud by comparing the evidence obtained from an interview with the customer to that held by the department.
- 2.13 Cases are checked for customer error or fraud at the point the customer is interviewed by a DWP benefit review officer. If the customer cannot be interviewed, the customer review relates to the week that the decision was

made not to interview the customer. The tight specification of the period in relation to which a case is checked for customer error or fraud, where the customer is not interviewed, is an improvement under SR04 measurement. This is described in more detail in paragraphs 3.21 – 3.24.

2.14 A customer may not be interviewed if:

- The case was already under fraud investigation when the DWP benefit review officer previewed the case
- A suspicion of fraud arose in the course of attempting to gain an interview with the customer
- The customer reported a change of circumstances that caused the given benefit to change before successful interview with the customer is achieved

2.15 In the first two scenarios the results of an investigation by a trained fraud investigator are followed up by the DWP review officer and used to determine if customer error or fraud was present. In the third scenario, a deduction about the customer review outcome may be made based on three conditions:

- a suspicion of fraud is observed during an attempted (or successful) interview,
- the customer terminates or changes benefit shortly after (attempted) contact by the DWP benefit review officer saying that their circumstances have just changed, and
- the case satisfies a strict causal link test requiring there to be a strong reason to deduce that the benefit change was a result of the attempted (or successful) interview

If the three conditions above all apply then the case is recorded as incorrect in the fieldwork stage of the process.

2.16 On average the time between the selection of the sample, which is the period checked for official error, and subsequent fraud and customer error visiting work is about eight weeks.

3. Changes to fraud and error measurement estimates for IS, JSA and Pension Credit

Introduction

- 3.1 Changes were brought in with re-baselining IS and JSA fraud and error measurement in order to address specific uncertainties and limitations in the results. The improvements to be implemented were agreed in advance with a wide range of stakeholders including Fraud and Error Strategy Division (FESD), Jobcentre Plus (JCP) and The Pension Service (TPS). This section describes the improvements made and the impact they have had on the results.
- 3.2 The derivation of the headline estimates according to re-baselined methodology is given in the tables in the final section. The impacts given in those tables are specific to 2005/06 and are subject to statistical uncertainty, sometimes to a great degree because they are based on very small samples of cases. The impacts would not necessarily have been the same in past periods and will also not necessarily be the same in future years. They are, however, useful indicators of which methodology changes are the biggest contributors to overall change in 2005/06.
- 3.3 The starting point used for estimating the impacts of the changes is a set of results calculated using SR02 measurement methodology but based on more up to date data for 2005/06. The data used differ from those used for the results published in February 2007 for the following reasons:
- Some specific data quality problems identified in the course of further work have been corrected.
 - Some cases previously outstanding due to incomplete fraud investigations or previously left outstanding for further information have been completed.
 - As is usual in our reports, predictions for the rates of fraud and error on outstanding cases were made in our February report. These are based on error rates for samples of comparable cases and can sometimes be inaccurate because the samples involved are relatively small.
- 3.4 The effect of the updated data was to increase the estimated overpayments due to fraud and error on IS by about £20m, on JSA by less than £5m and on

Pension Credit by about £10m.

- 3.5 This does not affect the conclusion about the SR02 target published in February. That conclusion had to be presented as a range because of a number of factors and uncertainties affecting the comparability of the estimates for the final SR02 year and the baseline year. These included the lack of information about the extent to which the baseline year's results were incomplete or affected by data quality problems.

Definitional changes

- 3.6 Some amendments have been made to the definitions of errors under SR04 measurement in order to bring the methodology closer to establishing the true financial impact of errors.

Office-identified overpayments

- 3.7 As cases are checked retrospectively for official errors in relation to the past period in which the sample is drawn, it is possible for local offices to identify official errors on sample cases before Performance Measurement (PM) checkers look at them.
- 3.8 If this happened under SR02 measurement, such office-identified overpayments were not counted in the fraud and error estimates. As an overpayment was made in the sample period these overpayments will be counted in the fraud and error estimates for SR04.
- 3.9 The inclusion of these overpayments account for a small increase in the estimate of official error overpayments of about £10m, with the effect concentrated in overpayments on Income Support.

Official errors with no financial impact

- 3.10 Under SR02 measurement some failures by DWP staff to follow procedures were counted as official errors, often full award errors, where the failure did not result in a real overpayment in the sample period. The reason these errors were recorded was often because the procedural failing meant the customer was legally not entitled to all the benefit they were receiving. These legal provisions exist to reduce the amount of benefit paid out when it should not be. However, steps taken to correct this group of official errors would not generally lead to a change in the benefit entitlement in the sample period. Under SR04 measurement some attempts have been made to recognise that not all failures by staff to follow procedures have a financial impact on the benefit award.

- 3.11 An example of such a procedural failing is where PM finds that a customer is not legally entitled to benefit because the office has not verified their identity before paying benefit in the sample period. Under SR02 measurement this would have been recorded as a full award official error. However, in most cases, an ensuing verification will prove entitlement so that the correction of the official error leads to no change in the benefit award. In such a case the error would not be counted under SR04 measurement as there has been no financial impact on the benefit entitlement in the sample period.
- 3.12 The impact of omitting official errors with no financial impact has been concentrated in JSA and has been small, with a reduction of about £10m in official error overpayments as a result of this change.
- 3.13 It should be noted that part of the reason the impact has been small is that a number of the areas of error where the impact of this methodology change would have been expected to be largest were already automatically excluded from reporting under SR02 measurement. Examples of this are errors associated with notional entitlement to other benefits and work focused interview errors.
- 3.14 It has also been recognised that there have been problems with operating the assessment of financial impact in practice. Firstly, testing of 2005/06 data found that a number of financial impact classifications did not match the expected classification for the particular error code and has led to the revisiting of some cases as part of a data quality assurance exercise, subsequent improvements to guidance and to internal assurance processes.
- 3.15 Secondly, measurement is on a snapshot basis with follow-up of missing evidence at the customer visit or by the office. The exclusion of some categories of official error with no financial impact would require more extensive tracking of cases with associated resource requirements or delays to reporting. It is being investigated how official errors with no financial impact can be more effectively excluded from measurement under SR07.

Entitlement to other benefits

- 3.16 A further way in which SR04 measurement brings the methodology closer to measuring the true financial impact of errors is by recognising entitlement to an alternative benefit when the one in payment is being paid erroneously.
- 3.17 For example, assume a customer is paid as a lone parent when the PM check finds that the customer is no longer entitled as they are living with their partner, who is also claiming as a lone parent. If the PM visit establishes that the customer and their partner are entitled to claim JSA as a couple and the partner subsequently claims and receives JSA for both of them, SR04 measurement

will offset the claim to JSA as a couple against the customer's and partner's claims as single persons. SR02 measurement would have recorded a full award error on the case due to the customer no longer being entitled as a lone parent.

3.18 The effect of offsetting entitlement to alternative benefits against overpayments has been to reduce the estimate of fraud and error on IS by about £20m and on JSA by less than £5m. There was no effect on Pension Credit.

3.19 It is recognised that SR04 measurement methodology in this area is subject to at least the following limitations:

- Offsetting of entitlement is limited to subsequent claims for one of the 3 benefits IS, JSA and Pension Credit. Thus a subsequent claim to Incapacity Benefit or Carer's Allowance would not be offset against the original claim.
- Entitlement to an alternative benefit in the sample period or customer review week is approximated by tracking cases to see if they make subsequent claims rather than relying only on an assessment of the customer's circumstances.
- The tracking of cases to pick up subsequent claims is limited to 6 weeks after the original claim is terminated.
- Entitlement to other benefits on cases subject to official error is estimated by matching sample results to administrative data sources.

Changes to the methodology used for dealing with imperfections in the review process

3.20 Other changes were made to improve the way in which practical imperfections encountered by the measurement review process are dealt with in the data recording and calculations.

Customer review week

3.21 The SR02 measurement process was based on a loose definition of the period in relation to which a case was checked for customer error/fraud. This would have led to some over-recording of frauds, in particular, as the fraud was not required to relate to a pre-specified payment week. Any frauds found through formal investigations on cases, either undergoing investigation at preview or referred as a result of the measurement process, and where the fraud was ongoing at any point while the case was under PM review, could have been included in the estimates.

- 3.22 There is evidence that the loose definition of the period in relation to which a case was checked for customer error/fraud that was used under SR02 measurement was subject to different interpretations. It was also found the interpretation may have changed over time and thus contributed to an overstatement of the reduction in fraud and error since the 1997/98 baseline. This was taken into account in the estimates of change over time presented in the February 2007 report through the presentation of a range rather than a point estimate for change.
- 3.23 Under SR04 measurement, the period in relation to which a case is checked for customer error or fraud has been more tightly defined in order to address the over-recording and variable interpretation problems described above. There is some risk that the tighter definition could lead to some under-recording of fraud because it is not always possible to prove a fraud in relation to a past period even if it was present. To overcome this, it has been necessary to impute according to a clear set of conditions that some frauds were present in the customer review week. When cases are referred for fraud investigation with a certain suspicion, which is subsequently proven by the investigation for some time after the referral, the fraud is imputed as being present in the customer review week. This is typical of living together cases and the majority of the cases we have imputed for fraud to be present in the customer review week have this error code.
- 3.24 The net effect of tightening the definition of the period in which customer error/fraud is measured and re-imputing some frauds has been to slightly reduce fraud and customer error overpayments by about £10m on IS, less than £5m on JSA and about £10m on Pension Credit in the new baseline compared to the end of SR02 target estimates.

Causal link process changes

- 3.25 Causal link fraud is described in paragraph 2.15 above. There is subjectivity involved in determining whether a reported change in circumstances was a result of an interview or attempted interview by PM or Fraud Investigation Service (FIS). This means that the causal link rule may be applied with different degrees of strictness for different review cases or for different periods of time.
- 3.26 Causal link fraud has been found to be a source of instability in the fraud and error measurement results over time. Consequently some process changes were introduced in 2005/06 in an attempt to bring greater consistency to this aspect of measurement.
- 3.27 Inevitably some subjective judgement will always be required regarding this aspect of measurement so that it adds uncertainty to the results. This non-sampling uncertainty is not reflected in the confidence intervals around our estimates.

Changes to the methodology related to sampling

3.28 Other changes were made to improve the way in which imperfections in the sampling are dealt with.

Calculation of results

Grossing structure

3.29 The grossing structure here denotes the way in which population weights are attributed to sample cases. This has been changed to better reflect the way in which the sample is drawn. This contributes to more accurate estimates of fraud and error as well as more accurate estimates of the imprecision around the central estimates and involves two main changes.

- Firstly, the estimates of fraud and error are now combinations of three separate sub-estimates calculated for each of the three separate samples drawn for each district once a trimester. In the SR02 estimates the three separate samples used to be treated as a single large sample. The change results in a more accurate weighting of cases as sample size differences between the stages will lead to heavier weights being applied to the stages with smaller sample sizes.
- Secondly, the estimates now recognise that the JSA sample is clustered in two sites within each district. In contrast, the SR02 estimates treated the JSA sample as if it were a random selection of cases from across the entire district. The new approach recognises there is greater variability in the sample as a result of the sample design.

Grossing formula

3.30 A combined ratio estimator has replaced a mean per unit estimator as the grossing formula. The new estimator calculates the percentage of expenditure overpaid in the following way. Weekly overpayment values and weekly award values on IS, JSA and Pension Credit sample cases are converted to national population overpayment and expenditure values by multiplying each case by grossing factors computed from the relevant caseload data. The national total grossed up overpayments in a particular client group are then divided by the national total grossed up benefit award values for that client group. Multiplying this ratio by the total spend gives the monetary value of the amount of benefit overpaid.

3.31 By contrast, the mean per unit estimator was calculated as follows. The monetary value of the amount of benefit overpaid was obtained by converting

weekly overpayment values on IS, JSA and SPC sample cases to population overpayment values by multiplying cases by relevant grossing factors. The percentage of expenditure overpaid was then obtained by dividing the population overpayment values computed from the sample by the benefit expenditure figures provided by the Programme Accounting Computer System (PACS). The weekly award values on the sample cases did not enter the calculations.

3.32 The decision to replace the mean per unit estimator with the combined ratio estimator was taken because the latter offers the following advantages:

- It offers closer alignment with the calculation methodology for fraud and error on Housing Benefit
- It facilitates other improvements to the grossing methodology to deal with sample deficiencies (described in paragraphs 3.46 to 3.70 below). Consequently, it should make the results more stable to changes in benefit administration and other technological changes that affect the data available for sample selection. And the formula should also provide a better basis for developing more sophisticated and efficient future sample selection methodologies.

3.33 The effect of changing the grossing structure and grossing formula has been to increase the estimates of fraud and error overpaid on JSA and Pension Credit in 2005/06 by less than £5m and about £10m respectively. The effect on IS was downwards by about £10m. The width of the confidence intervals around the JSA estimates has increased as the calculations now reflect the greater variability associated with a clustered sample design for this benefit.

Netting and Capping

3.34 Where a case has more than one error of the same 'type' of incorrectness (i.e. customer error, fraud or official error), then these errors are netted off. For example, if a case is found to have two different official errors, one leading to an underpayment and one leading to an overpayment, then these are 'netted' off to produce a single overpayment or underpayment figure to feed into the calculations. Where a case has an overpayment and an underpayment but of different 'types' of incorrectness, these are not netted off. This means that a case could have, say, an official error underpayment as well as a customer error overpayment.

3.35 A case may have overpayments of more than one 'type' which sum to a total greater than the amount in payment. For example, we may identify that an official error leading to an overpayment was present on a case in which the claimant was also committing a fraud. In such cases, if we were to include the

full amount of both overpayments, the total overpayment might be higher than the amount paid out in benefit to the claimant. The amount by which the total overpayment exceeds the benefit in payment is removed from the amount of fraud. This is known as 'capping'.

- 3.36 The incorrectness type that takes precedence is an arbitrary choice. Under the SR02 target, the practice was to count the full value of the fraud, if present, and then to remove any excess of overpayment first from any official errors present and then from any customer errors present. This practice has had to be changed under SR04 measurement to accommodate in the estimates the inclusion of the sample of cases that have only official error checks on them because they fall out of the sample before they can be visited. See paragraphs 3.38 and 3.39 for further detail. To achieve consistency across the official error sample, where errors of multiple incorrectness types are present on a case, the full value of the official error, if present, will be counted and then any excess of overpayment will be removed firstly from any customer errors present and then from any frauds present.
- 3.37 The change in the order in which incorrectness types are capped has no net impact on the estimates of total overpayments due to fraud and error and the effects on the incorrectness type breakdowns are small, well within the confidence intervals around these estimates.

Cases with official error checks only

- 3.38 Cases that fall out of the sample between the sample period and the visiting period because they go dormant or cannot be visited for other reasons, and therefore only have official error results, have been incorporated into the estimates. By contrast, error estimates used to be adjusted by the rate of full award errors among cases falling out of the sample before they could be visited. The new approach makes more comprehensive use of all the available data and therefore contributes to a less biased and more precise estimate.
- 3.39 This change has led to a net increase in the official error estimates in 2005/06 of less than £5m on each of the benefits IS, JSA and Pension Credit once the previous adjustment applied under SR02 measurement methodology has been taken into account.

Uneven age distribution of claims in the sample

- 3.40 There is an unavoidable delay, associated with gathering case papers and conducting previews amongst other operational considerations, between sample selection and visiting work. This delay

- means that few claims in their first few months will be represented in the sample of cases visited by PM to carry out customer error and fraud checking; and
 - artificially affects the distribution of the age of cases represented in the sample that can be visited.
- 3.41** Both of the above could affect the measurement of the level of fraud and error if rates of fraud and error differ with the age of the claim. Furthermore, operational factors result in variable delays so that the effects on the age distribution of sample cases also vary. The solution to the representation of claims in their first few months is discussed in paragraphs 3.46 to 3.54 below. The distortion to the age distribution is addressed by post-stratifying the sample of customer outcomes by claim duration and weighting each group according to its representation in the population to achieve a more accurate estimate of fraud and error.
- 3.42** The appropriate weights for the different claim duration strata were derived from the caseload using modelling techniques. For districts or Pension Centres to be comparable, it is necessary to set a common point in time after the caseload data has been supplied to correct for the ageing of claims in the sample of cases visited by PM. The caseload is aged by eight weeks from the time the sample was chosen in order to account for the delay between selection and customer review. Then the random outflow of cases in the caseload (from sample selection to a point eight weeks after) is modelled by using an exponential decay model.
- 3.43** The impact of the delay for JSA was particularly severe due to the short average duration of JSA claims. Hence it was decided to draw a supplementary sample of recently awarded claims shortly before the visits were due to be carried out and to prioritise the preparation and visiting of these cases. These claims are assigned to a shorter duration band and weighted together with the main JSA sample.
- 3.44** As official error checks are conducted retrospectively in relation to the sample period, the problems of an aged sample do not apply to the official error part of the measurement process. However, the over-representation of claims in their last weeks due to the sample design described in paragraphs 2.2 to 2.8, means that the official error outcomes also have to be post-stratified by duration and weighted according to their representation in the population.
- 3.45** The inclusion of a supplementary sample of more recent JSA claims together with the method used to correct for the age distribution of cases in the sample increased the headline estimate by about £10m for each of IS and JSA, and by less than £5m for Pension Credit. The inclusion of a supplementary sample of JSA new claims contributes to more precise estimates.

Incomplete sample coverage

- 3.46 For a variety of reasons not all expenditure on IS, JSA and Pension Credit falls within the scope of the measurement samples for these benefits.
- 3.47 It is estimated that for IS around 13%, for JSA around 34% and for Pension Credit around 12% of expenditure on each of these benefits was not covered in the sample assessed for customer error and fraud. For IS and JSA, the proportion of expenditure excluded from the sample assessed for official error is only a fraction of that excluded from the customer review sample due to the possibility of assessing, for official error, cases that fall out of the sample before they can be visited for the customer review.
- 3.48 Depending on the reason for non-coverage, different assumptions were made about the likely rates of fraud and error in the various groups so that we can provide estimates for the levels of fraud and error for the whole of expenditure on IS, JSA and SPC.
- 3.49 Different assumptions could have been made about the proportion of expenditure outside the scope of the sample and the rates of fraud and error in the groups not represented, for example, by using more years of data when calculating the assumed rates of fraud and error. Our estimates of the levels of fraud and error for the whole of fraud and error vary depending on which assumptions are used. It should be noted that the confidence intervals do not reflect the range of possible assumptions and so the estimates are more uncertain than indicated, however, it is estimated the missing uncertainty is relatively small.
- 3.50 The reasons for non-coverage are described below.

Claims in their first few months

- 3.51 In the IS and SPC samples, no customers claiming for under eight weeks will be visited by Performance Measurement to carry out customer error and fraud checking. This is due to the unavoidable delay, associated with gathering case papers and conducting previews among other operational considerations, between sample selection and visiting work.
- 3.52 This also used to be the case for JSA claims. But the drawing of a supplementary sample of JSA claims in their first few weeks shortly before visiting work is carried out has enabled the age of the most recent JSA claims in the measurement samples to be reduced to five weeks. This represents a substantial improvement to the sample coverage.

- 3.53 It is assumed that the rate of fraud and customer error in the IS, JSA and Pension Credit expenditure not covered in the sample of cases that undergo customer error and fraud checks and relating to claims in their first few months, is the same as the rate of fraud and customer error for expenditure on the groups of claims of shortest duration that *are* within the scope of the sample.
- 3.54 This is the largest element of expenditure not covered in both the IS and JSA samples.

Claim processing delays

- 3.55 The administrative datasets from which the IS and Pension Credit samples are drawn exclude some claims in their very early stages because it takes some time for them to be processed and registered on computer systems. The benefit reviews do not, and could not easily, then review the correctness of the expenditure that was paid retrospectively when the claims were awarded.
- 3.56 It has been assumed that the rates of fraud and error on claims in their earliest stages that are missing from the data scans for IS and Pension Credit have the same rates of fraud and error as the shortest duration claims that are within the scope of the respective samples ie that are less than 4 and 7 months old respectively.
- 3.57 It is assumed that the administrative data sets from which the supplementary samples of more recent JSA claims are drawn are not subject to the same processing delays so that JSA does not suffer from this undercount problem.

Abandoned cases

- 3.58 Of the cases sampled there are some that have to be explicitly excluded from the sample of cases that can be visited according to strictly defined criteria for abandonment. Cases that fall into this category include:
- Customers who have been visited less than 6 weeks earlier by the Department for other reasons
 - Customers who are terminally ill or who have partners who are terminally ill
 - Cases transferred to a district outside the PM team leader's area of responsibility for PM visits
- 3.59 It is assumed that abandoned cases have the same rate of fraud and error as that across all of the other sample cases we are able to measure.

Sites not visited

- 3.60 Changes to the organisational structure of The Pension Service that resulted in changes in ownership of some Pension sites prevented the measurement of performance in those sites. A rate of fraud and error equal to that across all the sites that could be measured had to be assumed for the unmeasured sites.
- 3.61 This is the largest element of expenditure not covered in the Pension Credit sample.

Reduction in sample of cases with official error checks only

- 3.62 In the last 4 months of the 2005/06 checking year, the sample of cases checked for official error only (see paragraphs 3.38 and 3.39) was reduced to the small number of cases falling out of the sample shortly before the customer was due to be visited.
- 3.63 Due to evidence of a different error rate on cases with official error checks only, action had to be taken to avoid biasing the estimates through the exclusion of the majority of cases falling out of the sample between the sample period and visiting period. It was assumed that the fraud and error rate on this group of abandoned cases was the same as similar cases reviewed in the first 8 months of the year.

Treatment of outstanding cases

- 3.64 The following paragraphs describe the approaches used in the calculations for two groups of sample cases that can be outstanding at the time that results are calculated. These approaches are not new but their impact has changed a little with the changes to the rest of the calculations.

Incomplete official error checks

- 3.65 A small percentage (2 - 5%) of cases remains outstanding after official error checking. This may be due to failure by the office or the customer to provide, within specified timescales, case papers or verification required in order to be able to complete the check. Other cases may be outstanding for outcomes on their official error checks where they are undergoing fraud investigations or are being considered by the PM arbitration team in the event of a dispute between the district/ pension centre and the PM checking team about whether a case is in error.
- 3.66 Where a case has an incomplete official error check, it is assumed that the rate of official error on the outstanding cases is the same as among those cases

that were previously incomplete but a conclusion has now been reached.

Incomplete fraud investigations

- 3.67 As the review process relies on the results of often lengthy fraud investigations where a sampled case is found to be subject to investigation at the point of preview or where a high suspicion of fraud arises during the course of the review, the investigation may not be completed at the time of the analysis so that final outcomes cannot be established on these cases.
- 3.68 For these cases it is assumed that the rate of fraud and error on the outstanding cases is the same as among previous cases that have also been subject to a fraud investigation and a conclusion has been reached.
- 3.69 The estimates of fraud and error on outstanding cases in the baseline are lower than in the end of SR02 results because the changes to methodology have necessitated drawing assumed rates of fraud and error from 2005/06 alone rather than across a number of years. These estimates may turn out to be too low if cases subject to fraud investigations that are completed later tend to have higher rates of fraud and error than those where the investigation is completed earlier. But given that the data is relatively complete, due to the extended length of time between the fieldwork period and this report, this effect is not expected to be severe.
- 3.70 The impact of extrapolating fraud and error estimates to cover all of expenditure and to account for cases outstanding at the point of reporting, after netting off previous estimates of fraud and error for outstanding cases, has been to increase IS fraud and error estimates by about £10m, to decrease JSA estimates by less than £5m and to decrease Pension Credit estimates by about £10m

4. Data quality and compliance

Background

- 4.1 The IS, JSA and Pension Credit measurement processes are subject to a series of validation checks. These aim to check that the measurement methodology is being correctly implemented and to provide assurance on the accuracy of the Monetary Value of Fraud and Error (MVFE) estimates.
- 4.2 There are several layers of validation carried out on the data feeding into these estimates.
- Accredited peers within the checking teams fully re-perform checks on all error cases, 5% of correct cases and most abandonments
 - Checking team managers carry out checks, particularly on fraud referrals and causal link categorisations
 - The National Assurance Team (NAT) in PM conduct checks on samples of cases
 - Administrative teams carry out data entry checks
 - Analysts in Information Directorate run automatic validation rules to identify inconsistencies on the database
 - Specific validation exercises may be conducted if checks identify a particular problem
- 4.3 Concerns about data quality problems associated with the large-scale introduction of methodology changes in 2005/06 prompted rigorous quality checking of a sub-sample of cases by NAT after the results of the individual reviews for the first half of 2005/06 were collected.
- 4.4 NAT found a considerable number of cases where different results should have been recorded to those which were originally given. This included both overstatements and understatements of the overpayment. There were also cases recorded as benefit correct where NAT found that an overpayment should have been recorded.

- 4.5 The findings suggested that further assurance was required over the accuracy of estimates derived from the 2005/06 data. As it would have been impractical to recheck every case on the database, we adopted the approach of using the NAT exercise to inform the design of work to collect further information on the data quality problems so that this could be used to adjust our estimates of overpayments, if necessary.

Evidence to support adjusting the 2005/06 re-baselined fraud and error estimates

- 4.6 The findings of NAT assurance of the full 2005/06 financial year's data were such that it has been judged necessary to adjust the re-baselined fraud and error estimates. The following empirical evidence supports this judgement:
- The further data quality assurance work confirmed the presence of high rates of data quality errors.
 - Zero is included sufficiently towards the tail of the bias distributions for both IS and JSA combined and Pension Credit to conclude that the net bias is different from zero.
 - The estimated net bias on the working age and pensioner estimates is itself made up of separate larger upward and downward biases resulting from different types of data quality problem.
- 4.7 Assurance checking is also being carried out for 2006/07 and 2007/08 data to provide a quantification of data quality bias that will enable the calculation of results that are meaningfully comparable with the baseline.
- 4.8 Data quality adjustments will have to be applied in future as long as the results of rechecking generate the same sorts of empirical evidence described in the bullets above.

Impact of the data quality adjustment on the re-baselined estimates of fraud and error

- 4.9 The data quality problems that the adjustment corrects for can be broadly separated into two categories:
- Cases which were originally incorrectly classified as having no overpayment when an overpayment should have been recorded.

- Cases which were originally classified as having overpayments but either the amount of the overpayment recorded was incorrect or the overpayment should not have been recorded at all.
- 4.10 It is assumed that the adjustment provides an unbiased estimate, that is to say, that it is assumed that estimates resulting from this re-checking would not be too high or too low on average. However, the consequence of using this adjustment is to introduce extra uncertainty around what the actual figure should be.
- 4.11 Without the adjustment to the re-baselined estimates for 2005/06, the overall figure for IS and JSA combined would have been about £10m higher. This implies that the fieldwork carried out over these 12 months would have overstated the level of overpayment overall. The adjustment more than doubles the formal sample-based confidence intervals around the adjusted estimates of fraud and error on IS and JSA combined.
- 4.12 The equivalent impact for Pension Credit is that the fieldwork carried out for 2005/06 would have understated the level of overpayment by around £30m overall. The adjustment more than doubles the confidence intervals around the adjusted estimates of fraud and error on Pension Credit.
- 4.13 The individual types of incorrectness are affected by the data quality adjustment in different ways. Further details on these effects and the uncertainty around the adjusted estimates are given in the tables.
- 4.14 The re-checking exercises concentrated on providing enough information to adjust estimates of overpayments at the national level. This meant that there were relatively small numbers of cases rechecked for each error type and for each area of new methodology. Thus there was not enough information available to account for the possibility of differing levels of misstatement between different types of error or between the different areas of new methodology. Consequently the error type breakdowns have been adjusted by a uniform scaling factor while the impacts of the different areas or new methodology have been left unadjusted. Care must be taken in interpreting both of these breakdowns as the amounts attributed to different types of fraud and error or areas of new methodology may not accurately reflect the true value of overpayments in the caseload.
- 4.15 Estimates of underpayments have not been adjusted. This introduces an extra level of uncertainty into these estimates beyond the confidence intervals given.

A Derivation of headline expenditure overpaid April 2005 to March 2006 according to re-baselined methodology		End of Spending Review 2002 estimates		New data	Definitional changes			Methodology change to deal with imperfections in the measurement process	Methodology changes related to sampling				Data quality adjustment	Re-baselined estimates	
		Central estimate	Confidence interval		Entitlement to other benefits	Official error with no financial impact	Office - identified overpayments		Redefined customer review week	Grossing structure and formula changes	Inclusion of official error outcomes on cases that cannot be visited	Uneven age distribution of claims		Incomplete sample coverage and treatment of outstanding cases	Central estimate
Income Support	Official Error	£120m	(80, 170)	£10m	£10m	£0m	£10m	£0m	£10m	<£5m	<£5m	<£5m	-£20m	£140m	(100, 170)
	Fraud	£200m	(140, 260)	£10m	£10m	£0m	£0m	-£10m	-£10m	£0m	<£5m	>-£5m	£10m	£200m	(150, 280)
	Customer Error	£130m	(90, 170)	>-£5m	£0m	£0m	£0m	>-£5m	-£10m	>-£5m	<£5m	£10m	£10m	£140m	(110, 170)
	Fraud and Error	£450m	(370, 540)	£20m	£10m	£0m	£10m	-£10m	-£10m	<£5m	£10m	£10m	<£5m	£480m	(400, 560)
Jobseeker's Allowance	Official Error	£40m	(20, 60)	£0m	>-£5m	-£10m	<£5m	£0m	<£5m	<£5m	<£5m	>-£5m	£0m	£40m	(40, 60)
	Fraud	£40m	(20, 60)	£0m	£0m	£0m	£0m	>-£5m	£0m	£0m	£10m	-£10m	-£10m	£30m	(10, 50)
	Customer Error	£20m	(0, 40)	£0m	£0m	£0m	£0m	£0m	£0m	£0m	>-£5m	<£5m	>-£5m	£10m	(0, 20)
	Fraud and Error	£100m	(80, 120)	<£5m	>-£5m	-£10m	<£5m	>-£5m	<£5m	<£5m	£10m	>-£5m	-£10m	£90m	(70, 120)
Working Age	Official Error	£160m	(120, 210)	£10m	£10m	£10m	£10m	£0m	£10m	£10m	<£5m	<£5m	-£20m	£180m	(140, 220)
	Fraud	£240m	(170, 310)	£10m	£10m	£0m	£0m	-£10m	-£10m	£0m	£10m	-£10m	£10m	£240m	(170, 310)
	Customer Error	£150m	(110, 190)	>-£5m	£0m	£0m	£0m	>-£5m	-£10m	>-£5m	£0m	£10m	<£5m	£150m	(120, 190)
	Fraud and Error	£550m	(470, 640)	£20m	£10m	£10m	£10m	-£10m	>-£5m	£10m	£10m	£10m	-£10m	£570m	(490, 660)
Pension Credit	Official Error	£130m	(110, 160)	<£5m	£0m	£0m	£0m	£0m	£20m	<£5m	£0m	>-£5m	£10m	£160m	(80, 230)
	Fraud	£60m	(40, 80)	<£5m	£0m	£0m	£0m	>-£5m	>-£5m	£0m	£0m	>-£5m	<£5m	£50m	(30, 80)
	Customer Error	£80m	(60, 100)	>-£5m	£0m	£0m	£0m	>-£5m	£0m	£0m	<£5m	>-£5m	£20m	£100m	(70, 140)
	Fraud and Error	£270m	(240, 310)	£10m	£0m	£0m	£0m	-£10m	£10m	<£5m	<£5m	-£10m	£30m	£310m	(220, 400)

B Derivation of headline percentage of expenditure overpaid April 2005 to March 2006 according to re-baselined methodology		End of Spending Review 2002 estimates		New data	Definitional changes			Methodology change to deal with imperfections in the measurement process	Methodology changes related to sampling				Data quality adjustment	Re-baselined estimates	
		Central estimate	Confidence interval		Entitlement to other benefits	Official error with no financial impact	Office -identified overpayments		Redefined customer review week	Grossing structure and formula changes	Inclusion of official error outcomes on cases that cannot be visited	Uneven age distribution of claims		Incomplete sample coverage and treatment of outstanding cases	Central estimate
Income Support	Official Error	1.3%	(0.9, 1.8)	0.2%	-0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	-0.2%	1.4%	(1.0, 1.8)
	Fraud	2.1%	(1.5, 2.8)	0.1%	-0.1%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.2%	2.2%	(1.6, 2.9)
	Customer Error	1.4%	(1.0, 1.8)	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.1%	0.1%	1.5%	(1.2, 1.8)
	Fraud and Error	4.8%	(4.0, 5.7)	0.2%	-0.2%	0.0%	0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.0%	5.1%	(4.3, 6.0)
Jobseeker's Allowance	Official Error	1.7%	(1.1, 2.4)	0.0%	0.0%	-0.2%	0.0%	0.0%	0.2%	0.2%	0.1%	0.0%	0.0%	1.9%	(1.5, 2.5)
	Fraud	1.9%	(1.1, 2.7)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	-0.3%	-0.4%	1.4%	(0.7, 2.2)
	Customer Error	0.7%	(0.1, 1.3)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	-0.2%	0.5%	(0.0, 1.1)
	Fraud and Error	4.3%	(3.1, 5.5)	0.0%	0.0%	-0.3%	0.0%	0.0%	0.2%	0.2%	0.3%	-0.2%	-0.6%	3.9%	(3.0, 5.0)
Working Age	Official Error	1.4%	(1.0, 1.8)	0.1%	-0.1%	-0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	-0.1%	1.5%	(1.2, 1.9)
	Fraud	2.1%	(1.5, 2.7)	0.1%	-0.1%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.1%	-0.1%	0.0%	2.0%	(1.5, 2.7)
	Customer Error	1.3%	(1.0, 1.6)	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.1%	0.0%	1.3%	(1.0, 1.6)
	Fraud and Error	4.7%	(4.1, 5.4)	0.2%	-0.2%	-0.1%	0.1%	-0.1%	0.0%	0.1%	0.1%	0.1%	-0.1%	4.9%	(4.2, 5.6)
Pension Credit	Official Error	2.0%	(1.6, 2.3)	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%	2.4%	(1.2, 3.6)
	Fraud	0.9%	(0.6, 1.4)	0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.8%	(0.5, 1.2)
	Customer Error	1.2%	(1.0, 1.5)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.5%	(1.0, 2.2)
	Fraud and Error	4.1%	(3.6, 4.7)	0.1%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.0%	0.0%	-0.1%	0.4%	4.7%	(3.4, 6.1)

Notes to the Tables

Table A

1. All estimates relate to the period April 2005 to March 2006. The table illustrates how the new baseline monetary amounts of expenditure overpaid are derived from the amounts published in February 2007 for the end of the Spending Review 2002 target.
2. A figure of £0m indicates that the unrounded estimate is greater than -£0.5m and less than £0.5m.
3. The expression <£5m indicates that the unrounded estimate is greater than or equal to £0.5m and less than £5m.
4. The expression >-£5m indicates that the unrounded estimate is greater than -£5m and less than or equal to -£0.5m.
5. Overpaid expenditure less than or equal to -£5m and greater than or equal to £5m is rounded to the nearest £10m.

Table B

6. All estimates relate to the period April 2005 to March 2006. The table illustrates how the new baseline percentages of expenditure overpaid are derived from the percentages published in February 2007 for the end of the Spending Review 2002 target.
7. Estimates are expressed as a percentage of the expenditure for the particular benefit and are rounded to one decimal point.

Both Tables

8. Rows and columns may not sum to totals due to rounding.
9. 95% confidence intervals express the sampling uncertainty, together with some sources of non-sampling uncertainty, around the end of SR02 estimates and the re-baselined estimates.



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ISBN 978-1-84763-192-3