



GOVERNMENT **ACTUARY'S** DEPARTMENT

**Report for the Ministry of Defence in relation to the case in the
European Court of Human Rights
British Gurkha Welfare Society and Others v The United Kingdom
Application no: 44818/11
Comparison of Value of the benefits of the Gurkha Pension Scheme
and the Armed Forces Pension Scheme 1975**

Date: 26 July 2013

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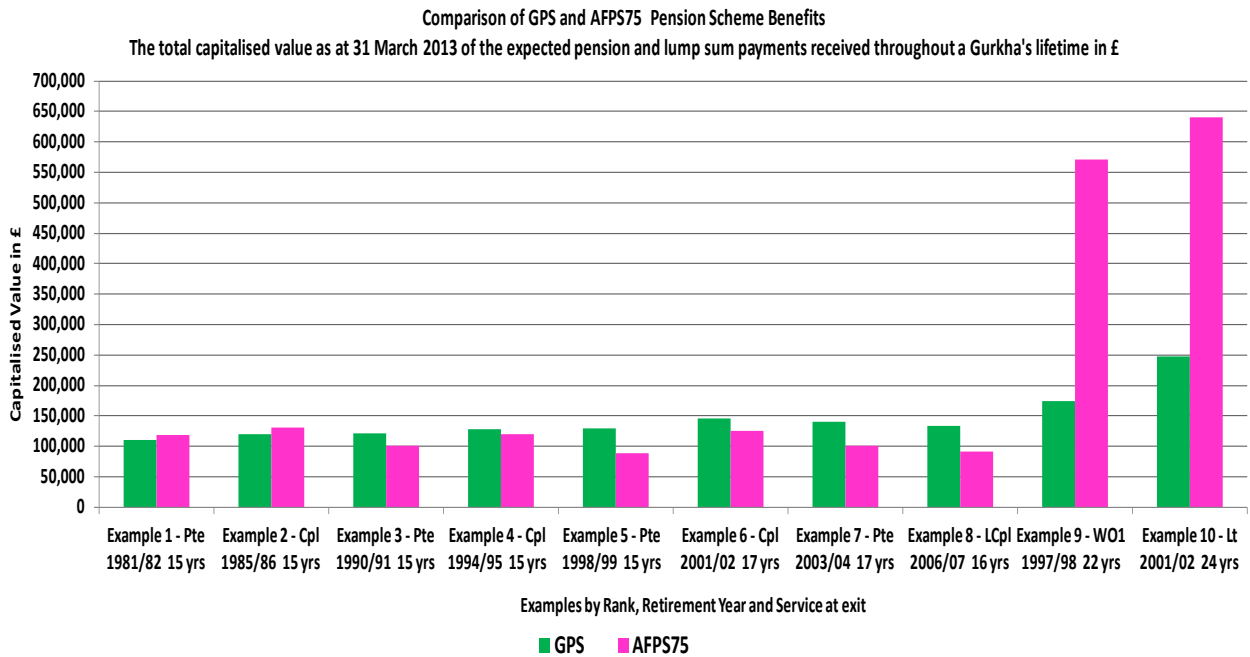
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1 Introduction and Executive Summary

- 1.1 This report has been prepared by the Government Actuary's Department ('GAD') in its capacity as actuarial advisor to the UK's Ministry of Defence ('MOD') in respect of the Armed Forces Pension Scheme ('AFPS'). We understand that this report is to be presented as evidence in the case of *British Gurkha Welfare Society and Others v The United Kingdom* at the European Court of Human Rights (ECHR).
- 1.2 We have been asked by the MOD to compare the pension and lump sum benefit payments received by members of the Gurkha Pension Scheme (GPS) against the pension and lump sum benefit payments that the Gurkhas would have received from the Armed Forces Pension Scheme 1975 (AFPS75) had they been members of that scheme throughout their expected lifetimes (which are assumed to be to age 87 years for Non-Officers and age 89 years for Officers). Non-Officers are those Gurkhas who held the rank of Warrant Officer 1 or below at the time of exit from service. Officers are those Gurkhas who held the rank of Lieutenant or above at the time of exit from service. This comparison has been carried out for 10 example cases (varying by rank, retirement year, service and age at exit) that the MOD has selected from the list of applicants in the ECHR case. In each example, the benefits from the two schemes differ both by amount and timing and therefore the capitalised value of the benefits payable from each scheme have been compared.
- 1.3 We have also been asked to illustrate how these example members fit within the wider applicant population. When drawing any conclusions from this analysis it is important to recognise that we have only considered the profile of the 308 applicants for whom MOD has been able to identify pension records, and not the wider GPS population. Therefore, any conclusions drawn here cannot automatically be assumed to apply to the whole GPS population.
- 1.4 Our analysis of the 10 example cases, as illustrated in Chart A1, shows that for 8 of the 10 examples the assessed capital values of the benefits that they are expected to receive from GPS are either broadly comparable to, or greater than, the assessed capital values of the AFPS75 benefits. This is because, for these 8 examples, the AFPS75 benefits they would have received are deferred and so are not payable until age 60, except for the resettlement grant, whereas the GPS pays benefits immediately at exit after 15 years' service (typically around the age of 33). Therefore, these Gurkhas would have received nearly 30 years of GPS pension payments before the hypothetical AFPS75 pension would have come into payment. This offsets (to various extents) the effects of the higher initial AFPS75 pension and lump sum once it would have come into payment. Our analysis also indicates that the value of GPS benefits varies over time and is typically more generous, relative to AFPS75, for those Gurkhas who left service more recently (particularly after 1989).
- 1.5 Chart A1 shows the total capitalised value as at 31 March 2013 of the benefits in GPS and AFPS75 for each example. A larger version of this chart is shown in Appendix A together with the data that underlies Chart A1.

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Chart A1



- 1.6 Further charts are shown in section 2 which illustrate how the capitalised value of pension benefits in each scheme builds up over time.
- 1.7 The MOD has been able to identify pension records for only 308 out of the 399 applicants in the ECHR case. The GPS service and retirement year profiles for the 308 applicants are illustrated below in Chart C1 and Chart C2. The 10 example cases are also shown on each chart to show how they fit relative to the service and retirement year profiles of the applicants. Chart C1 shows that 296 of the 308 identified applicants have served less than 22 years' service at exit, and Chart C2 shows that 276 of the 308 identified applicants have retired after 1989.
- 1.8 Chart C1 shows the service profile of the 308 identified applicants and chart C2 shows the retirement year profile of the 308 identified applicants.

Chart C1

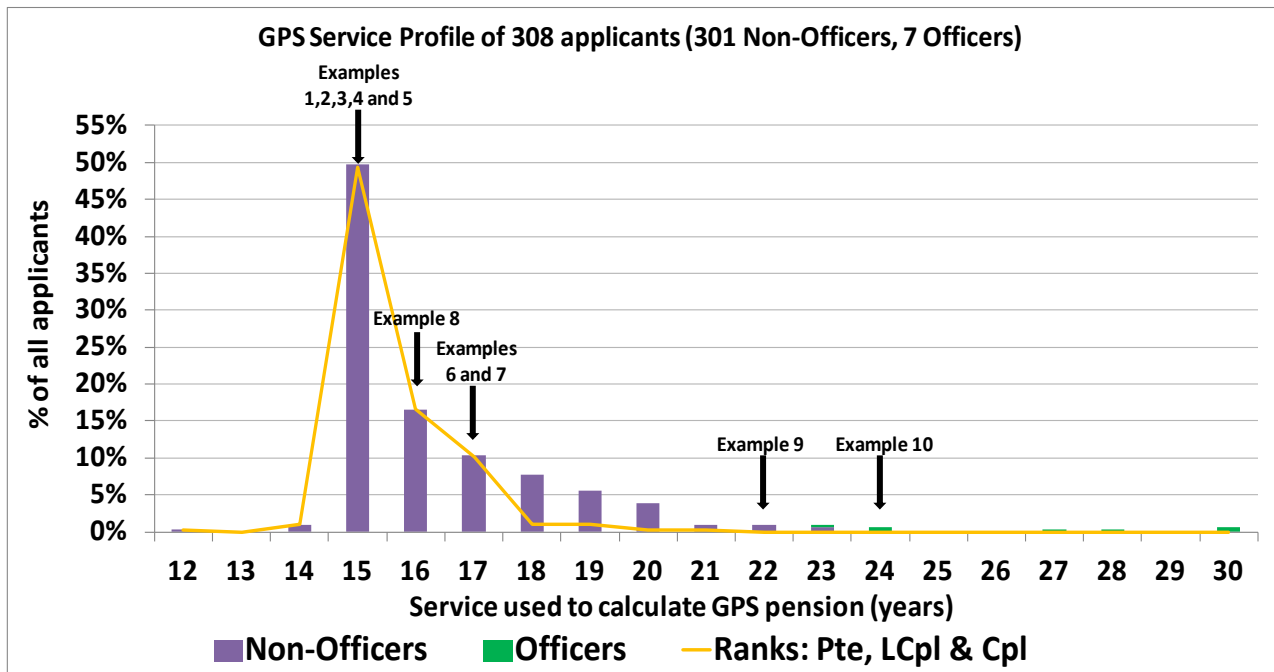
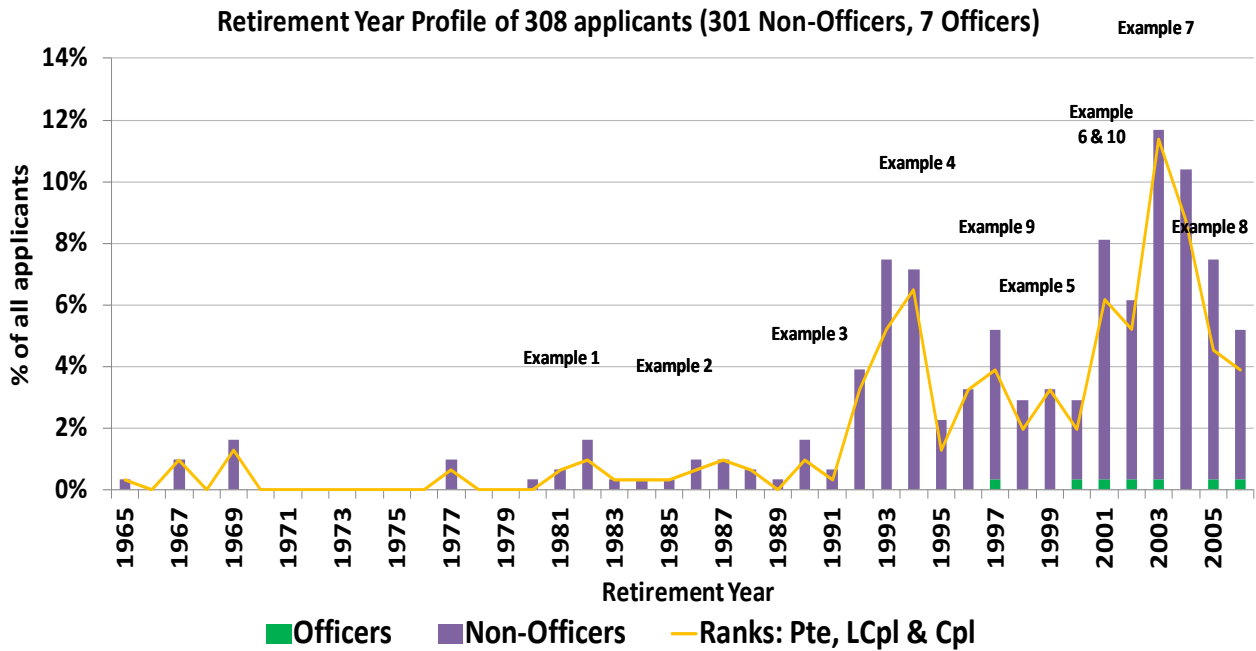


Chart C2



- 1.9 Our analysis shows that 296 of the 308 applicants are Non-Officers with less than 22 years' service. Of these 296 Non-Officers, 61 have been identified as having retired on redundancy or with an ill health pension from GPS (see paragraph 1.11 below). The remaining 235 applicants, which is more than half of the applicants, would, if they had been members of AFPS75, have been entitled to deferred benefits payable from age 60, except for the resettlement grant. By contrast, the GPS pays benefits immediately at exit after 15 years' service. Therefore, it is likely that if comparisons were carried out for each of these individual members, then we would determine that the assessed capital value of the benefits that they are likely to receive from the GPS would be broadly the same as, or greater than, the assessed capital value of the AFPS75 benefits.
- 1.10 There are some circumstances where the assessed capital value of the AFPS75 pension benefits is likely to be greater than the assessed capital value of the GPS pension benefits. This is most notable in cases where the Gurkha would have been entitled to immediate pension benefits in AFPS75, from the time of exit from service. This applies to 2 of the 10 example cases we have analysed. In those 2 example cases, the assessed capital value of the AFPS75 benefits was significantly more than (around 3 times) the assessed capital value of the GPS benefits. However, our analysis indicates that only 12 of the 308 applicants identified by the MOD would have been entitled to an immediate AFPS75 pension on normal benefit terms. Of these 12, 7 are Officers and 5 are senior Non-Officers (rank of Warrant Officer 2 and above).
- 1.11 In addition to the 12 Gurkhas who would have been entitled to an immediate AFPS75 pension on normal benefit terms, 61 of the 308 identified applicants have been identified as having retired on redundancy or with an ill health pension. These members had not completed enough service to be eligible for an immediate pension on normal benefit terms in AFPS75, had they been members of that scheme. However, the AFPS75 also includes provisions to provide members with immediate pensions at earlier ages in the event of redundancy or disability. If these members would have been entitled to immediate ill health benefits or immediate redundancy benefits in AFPS75, the assessed value of the AFPS75 benefits would be expected to be greater than the assessed value of the GPS pension benefits.

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

- 1.12 When assessing the benefits that would have been payable from AFPS75, we have assumed that the career paths followed by the example Gurkhas would have remained unchanged had they had access to that scheme. This is because the MOD have instructed us that even if a Gurkha had access to AFPS75, most would not have been allowed to extend their service to the 22 years required to reach the AFPS75 Non-Officer immediate pension point. If this was not the case then this could lead to different results for the example cases and for the conclusions we have drawn from our analysis of the applicant profile.
- 1.13 Further details of our results are shown in section 6. Our results are based on the data, methodology and assumptions described in the rest of this report. It is important to note that if a different methodology or assumptions were adopted for the assessment, then the results of our analysis could also be materially different.
- 1.14 Other than the UK Government; the Court; and the Applicants for the purposes of consideration of the issues in these proceedings, no person or third party is entitled to place any reliance on the contents of this report, and GAD has no liability to any person or third party for any act or omission taken, either in whole or part, on the basis of this report.
- 1.15 GAD seeks to achieve a high standard in all our work. Please go to our [website](#) for details of the standards we apply.

2 Summary of the 10 Example Cases in Graphical Form

This section contains charts for each of the 10 examples. The underlying data used to determine the benefit amounts in the example cases have been provided by MOD.

Charts labelled A2, A3 and A4

- Chart A2 compares the GPS and AFPS75 benefits, the pension and lump sum payments, expected to be received in each year throughout a Gurkha's lifetime expressed in real 2013 pound sterling price terms. The blue bars represent the annual GPS pension payments and the yellow bars represent the GPS lump sum payments (both the resettlement grant and the death cum retirement gratuity). The black bars represent the annual AFPS75 pension payments and the red bars represent the AFPS75 lump sum payments. For those example cases, 1 to 8, which are compared against the deferred benefits in AFPS75 the red bar at the start of the chart is the resettlement grant payable immediately upon exit. The second red bar represents the AFPS75 terminal grant payable at the deferred age 60. For those example cases, 9 and 10, which are compared against immediate benefits in AFPS75 there is only one red bar which represents the AFPS75 terminal grant payable immediately on exit from service. All figures are in real 2013 pound sterling price terms.
- Chart A3 compares the capitalised value as at 31 March 2013 of the GPS and AFPS75 benefits, the pension and lump sum payments, expected to be received in each year throughout a Gurkha's lifetime in pound sterling. The blue bars represent the capitalised value of the annual GPS pension payments and the yellow bars represent the capitalised value of the GPS lump sum payments (both the resettlement grant and the death cum retirement gratuity). The black bars represent the capitalised value of the annual AFPS75 pension payments and the red bars represent the capitalised value of the AFPS75 lump sum payments. For those example cases, 1 to 8, which are compared against the deferred benefits in AFPS75 the red bar at the start of the chart is the capitalised value of the resettlement grant payable immediately upon exit. The second red bar represents the capitalised value of the AFPS75 terminal grant payable at the deferred age 60. For those example cases, 9 and 10, which are compared against immediate benefits in AFPS75 there is only one red bar which represents the capitalised value of the AFPS75 terminal grant payable immediately on exit from service. All figures are capitalised as at 31 March 2013.
- Chart A4 compares the cumulative capitalised value as at 31 March 2013 of the GPS and AFPS75 benefits, the pension and lump sum payments, expected to be received throughout a Gurkha's lifetime in pound sterling. The green line represents the cumulative total capitalised value of the GPS benefit payments (both pension and lump sums). The pink dashed line represents the cumulative total capitalised value of the AFPS75 benefit payments (both pension and lump sums). All figures are capitalised as at 31 March 2013.

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 1: Private with 15 years' service retiring in 1981/82

Chart A2 – Example 1

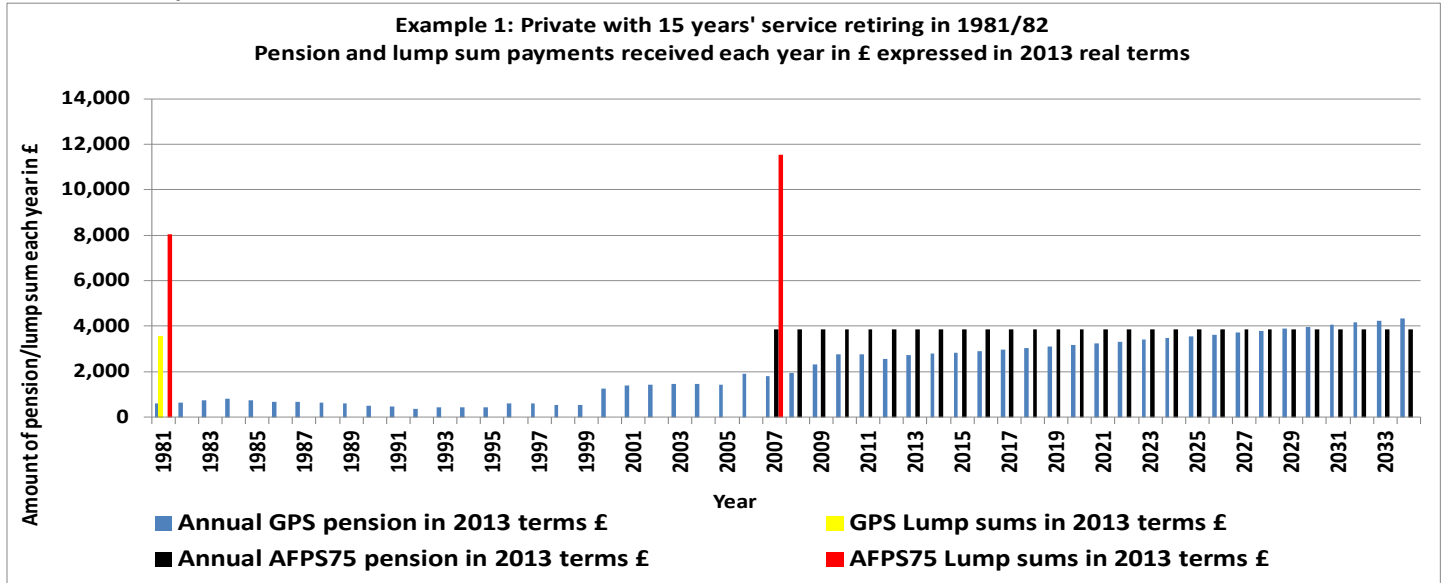


Chart A3 – Example 1

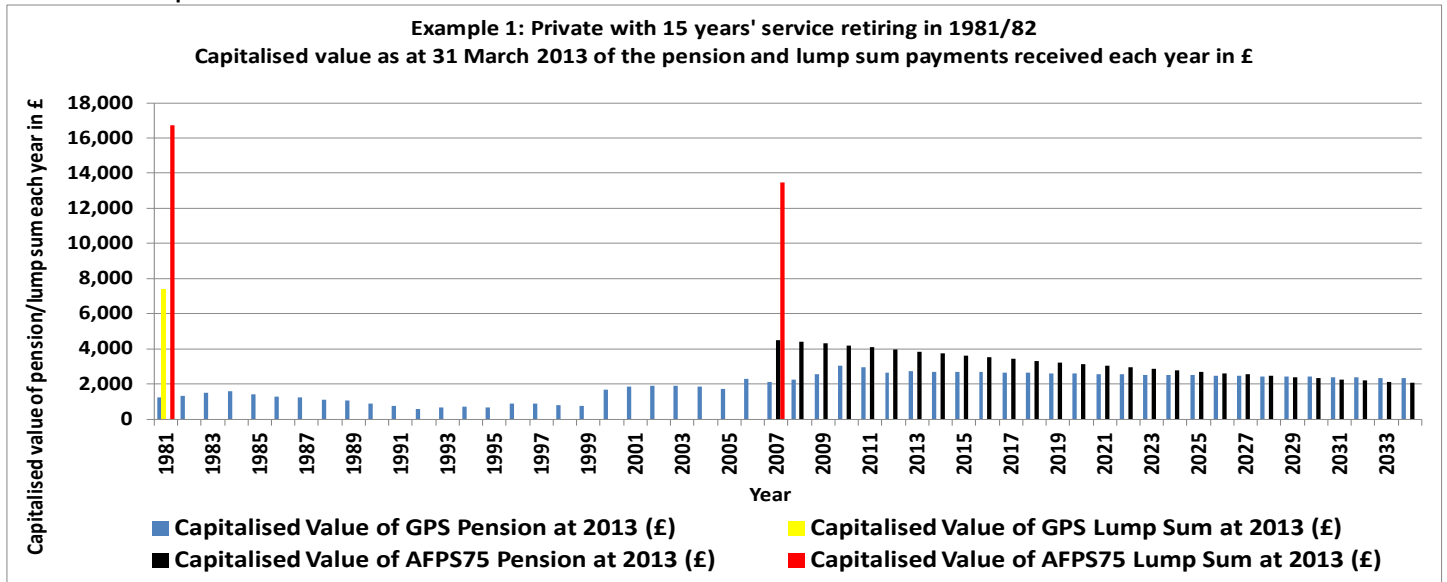
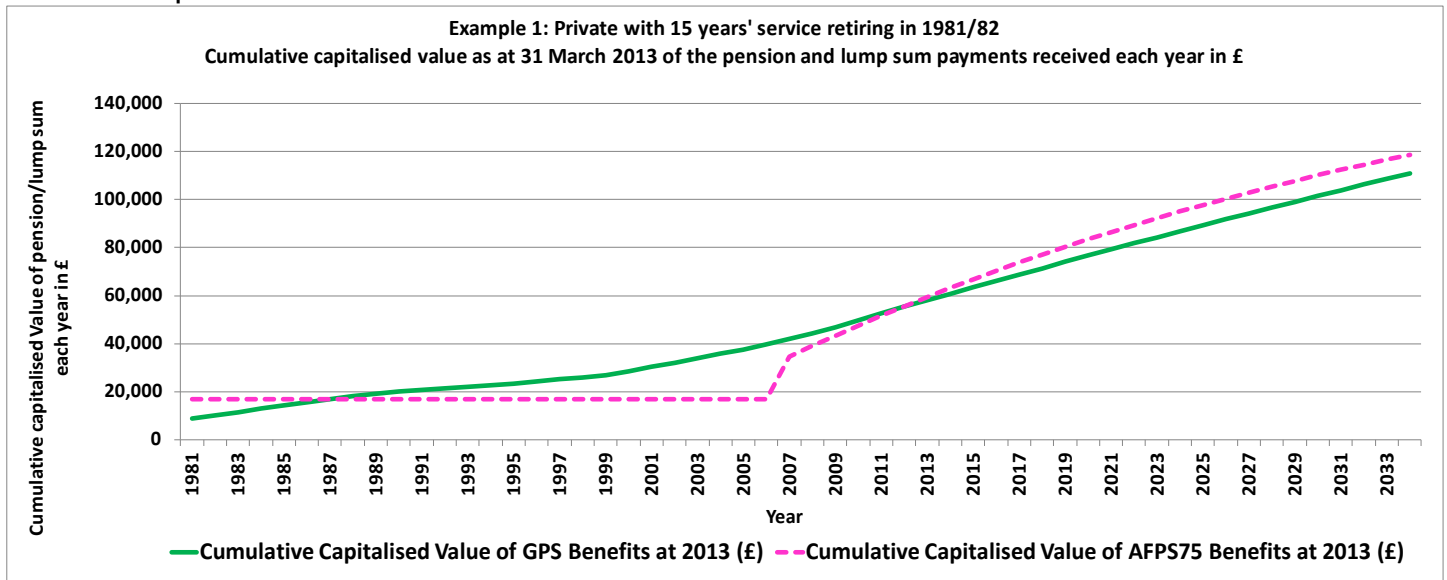


Chart A4 – Example 1



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 2: Corporal with 15 years' service retiring in 1985/86

Chart A2 – Example 2

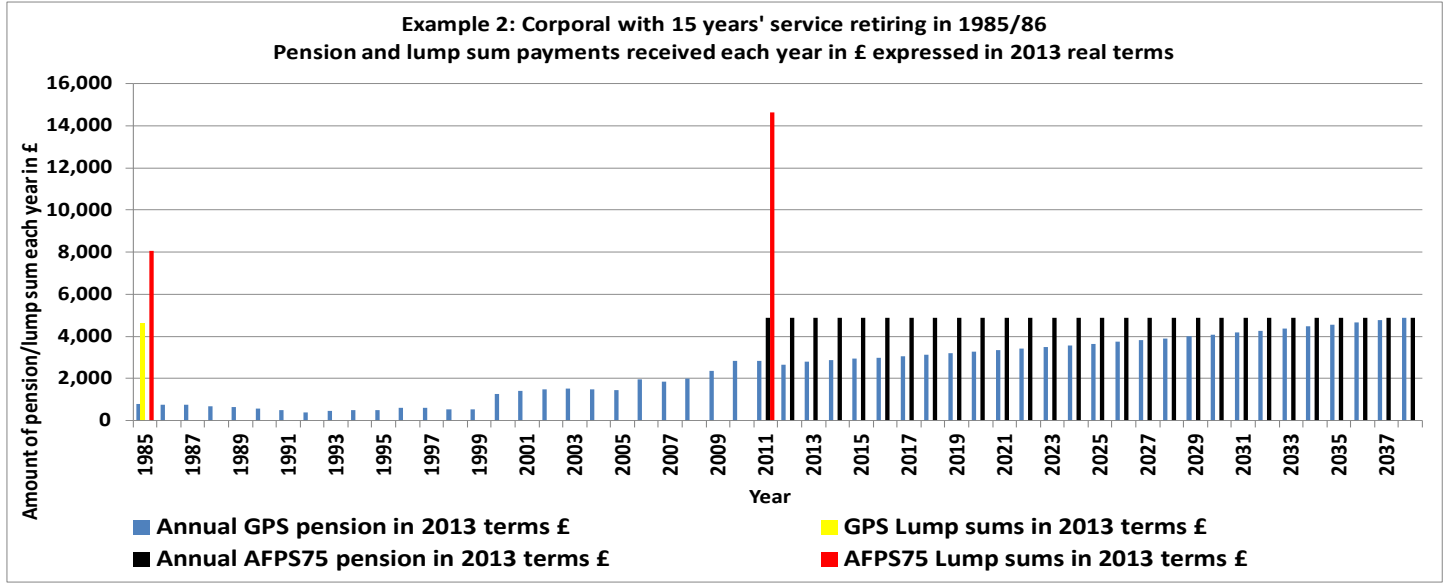


Chart A3 – Example 2

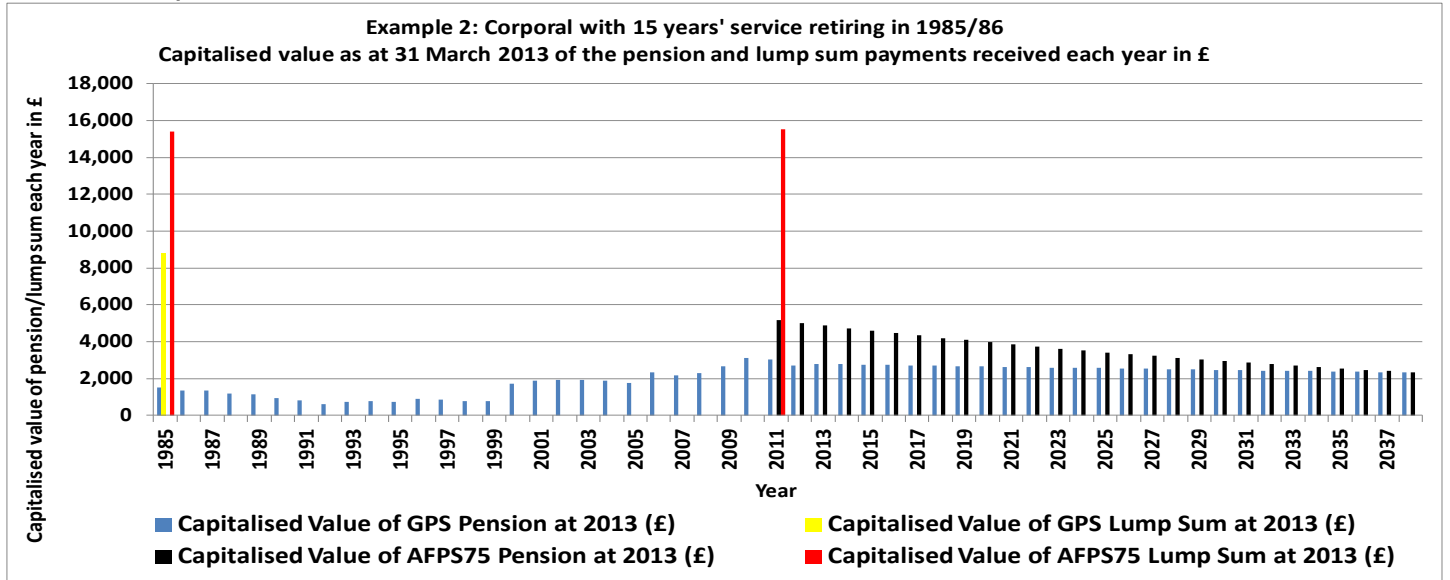
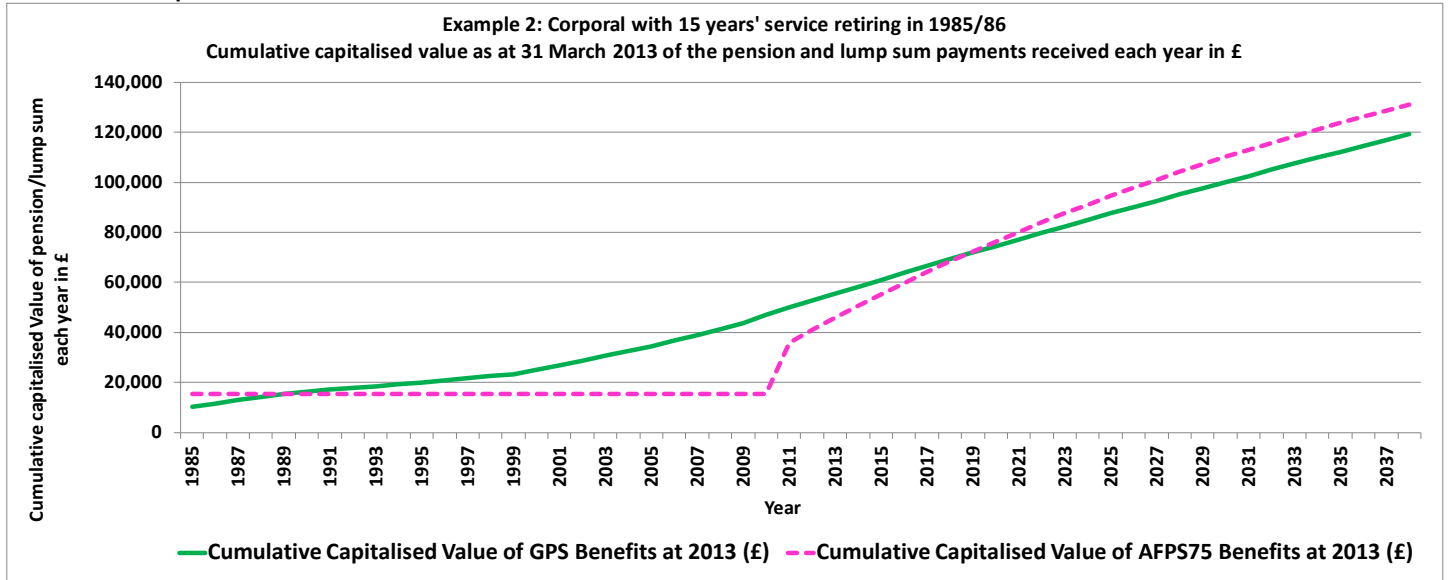


Chart A4 – Example 2



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 3: Private with 15 years' service retiring in 1990/91

Chart A2 – Example 3

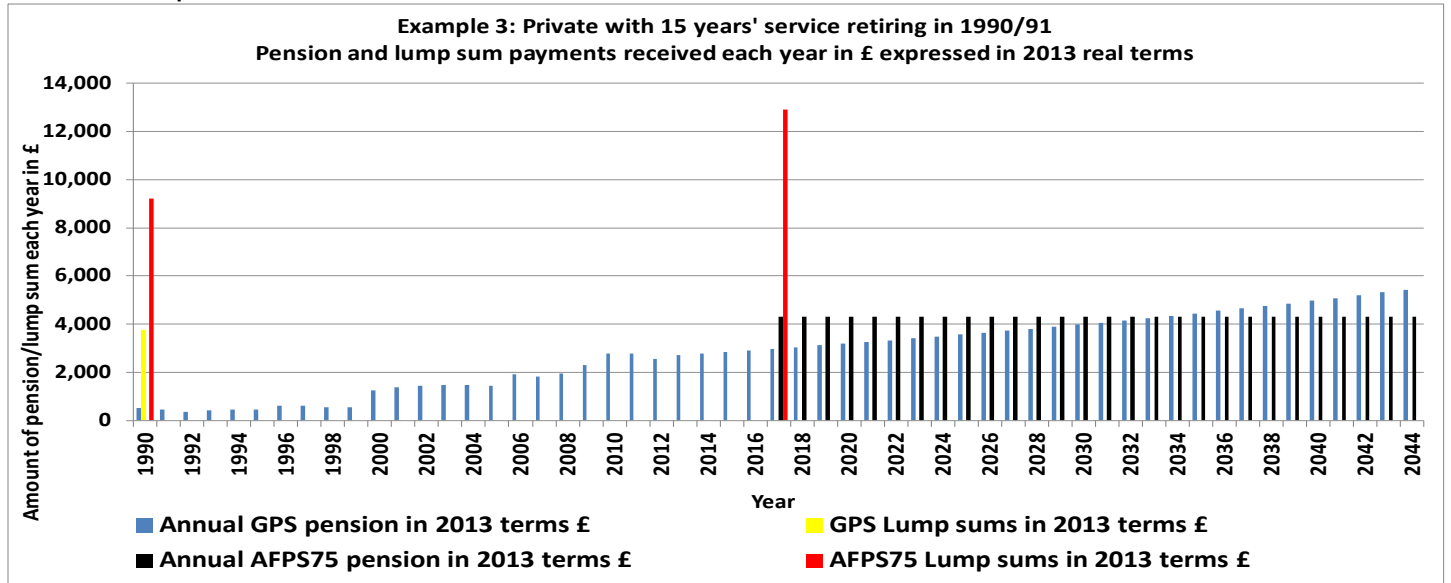


Chart A3 – Example 3

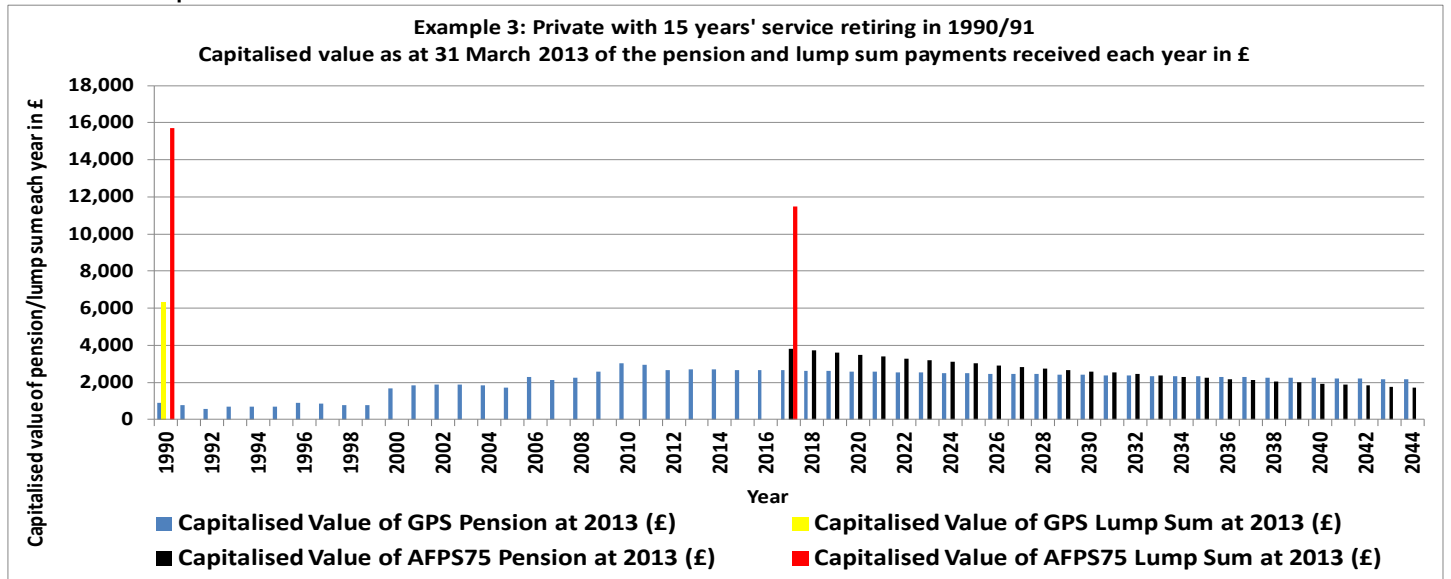
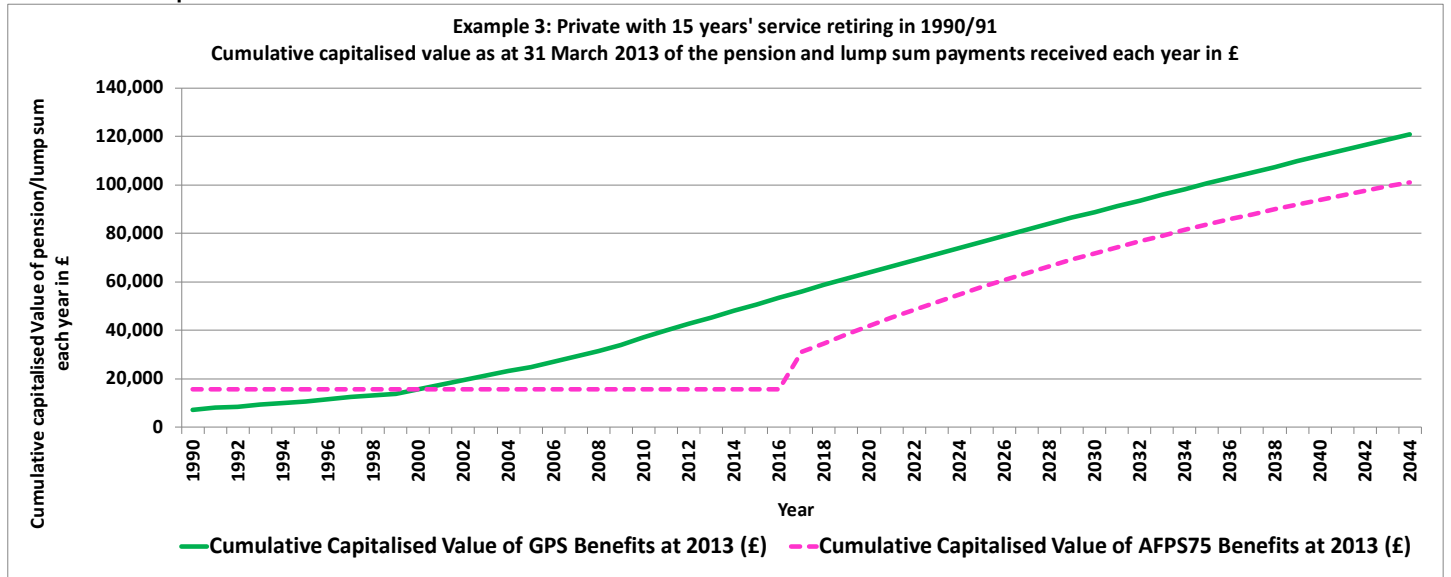


Chart A4 – Example 3



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 4: Corporal with 15 years' service retiring in 1994/95

Chart A2 – Example 4

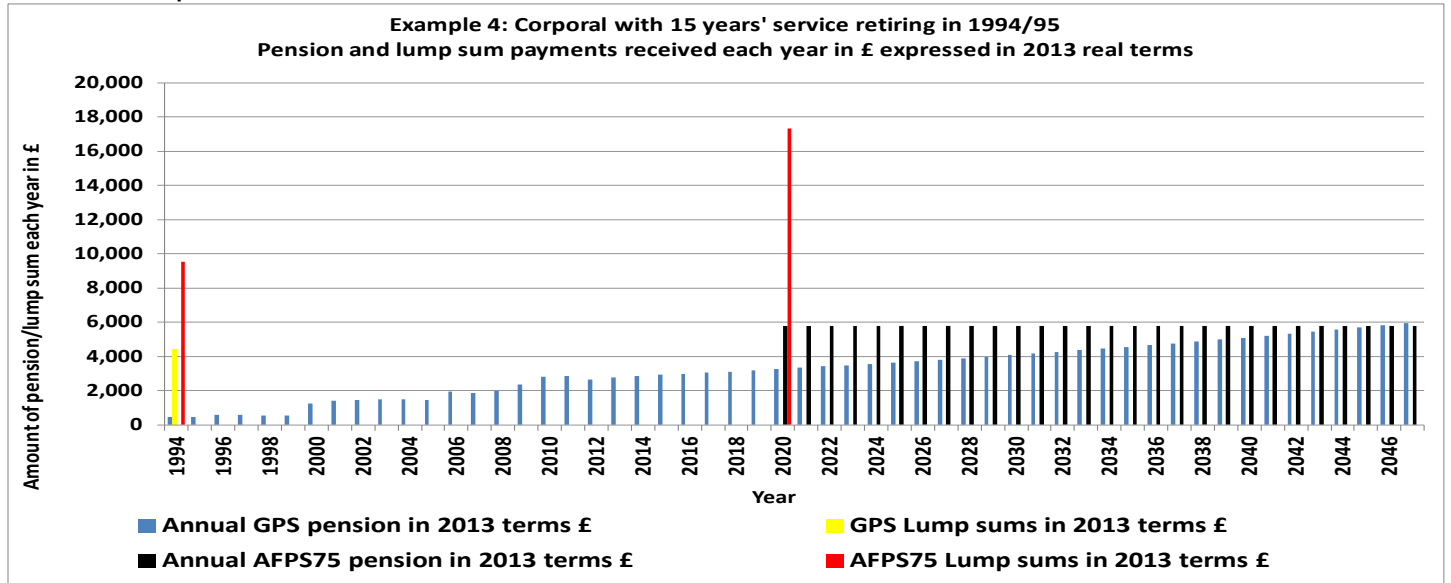


Chart A3 – Example 4

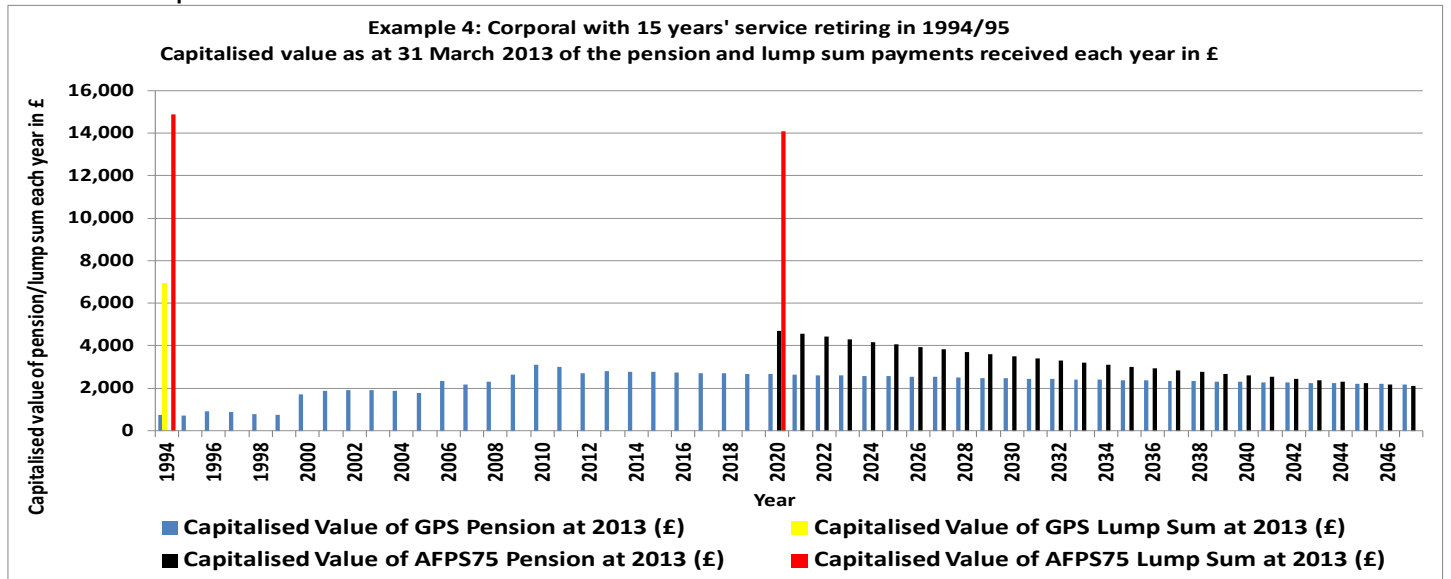
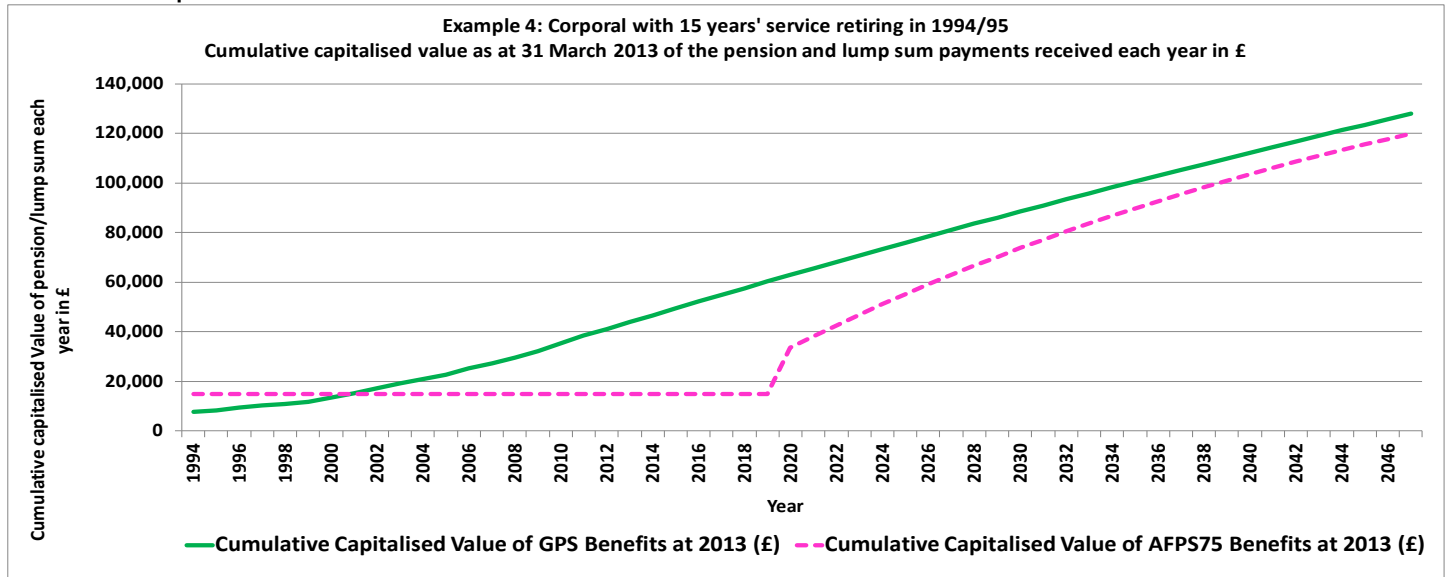


Chart A4 – Example 4



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 5: Private with 15 years' service retiring in 1998/99

Chart A2 – Example 5

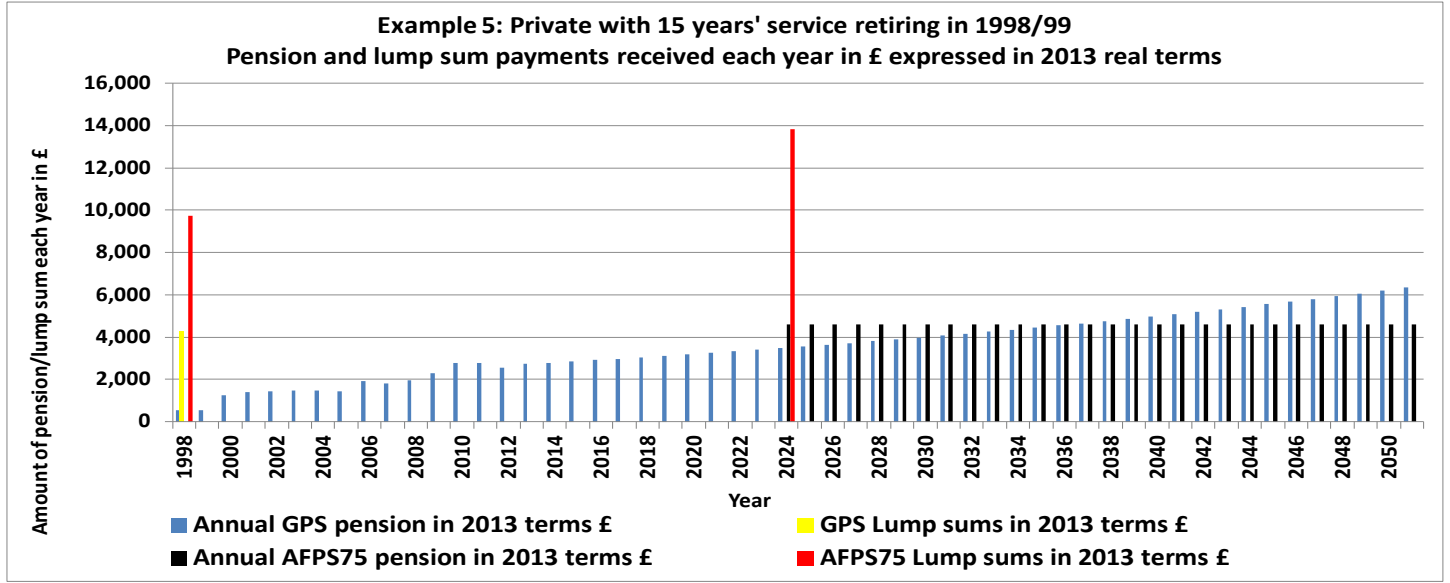


Chart A3 – Example 5

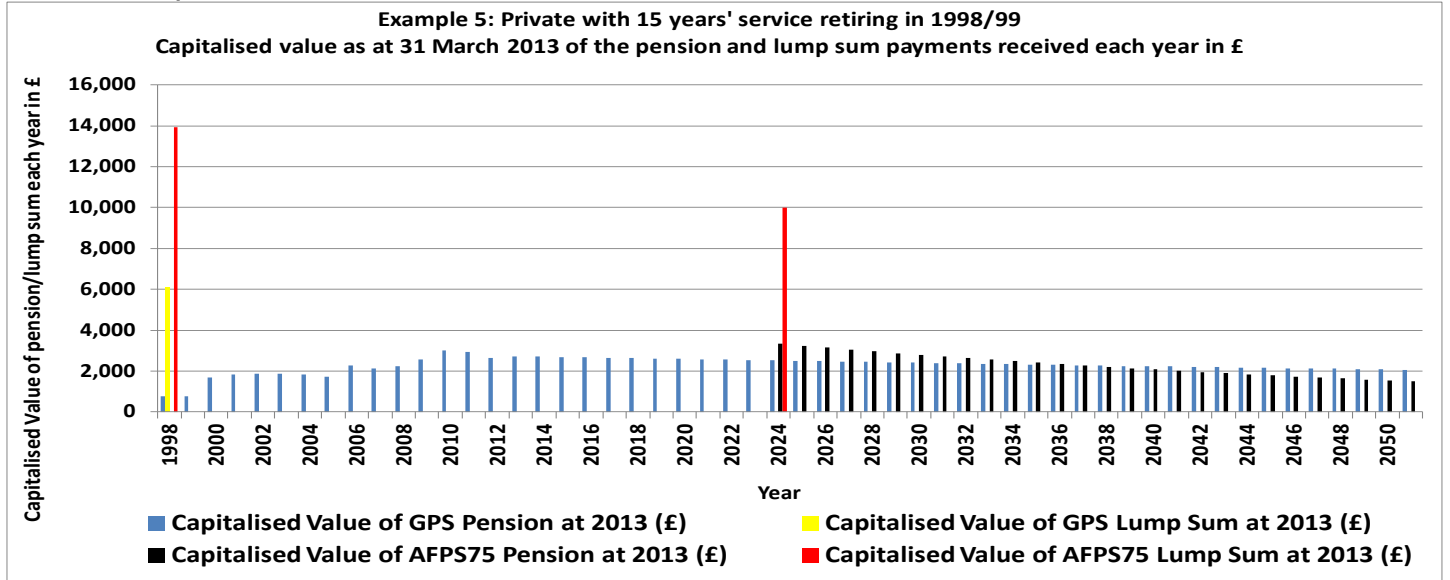
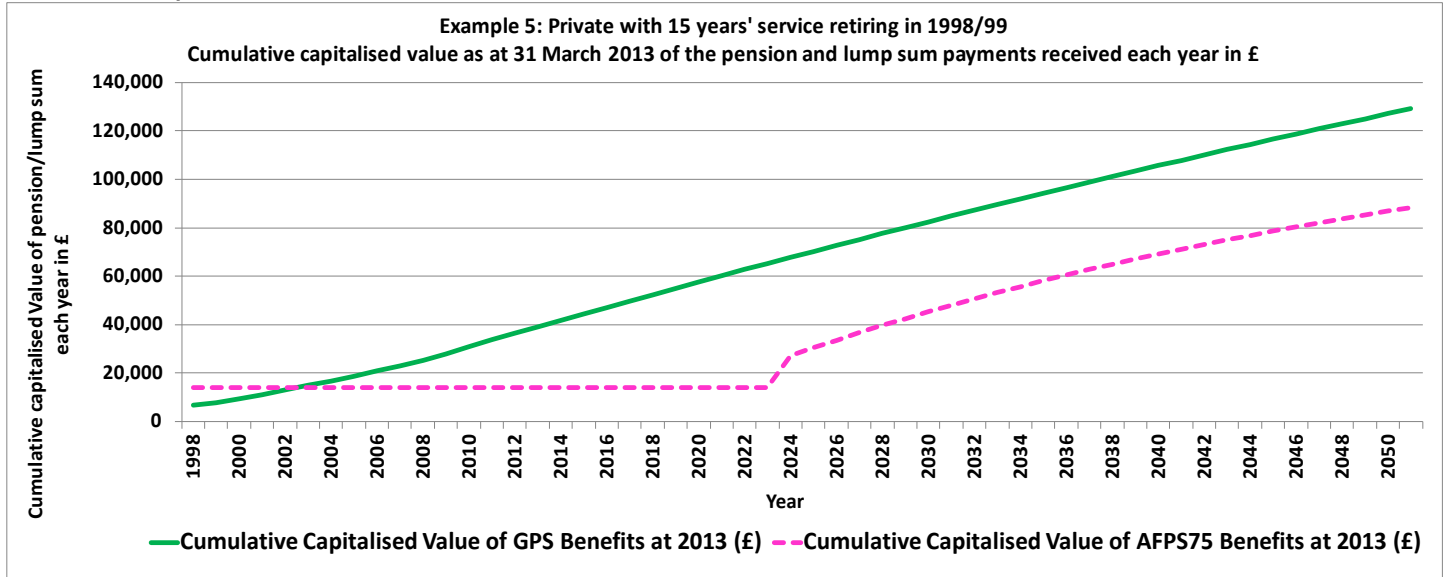


Chart A4 – Example 5



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 6: Corporal with 17 years' service retiring in 2001/02

Chart A2 – Example 6

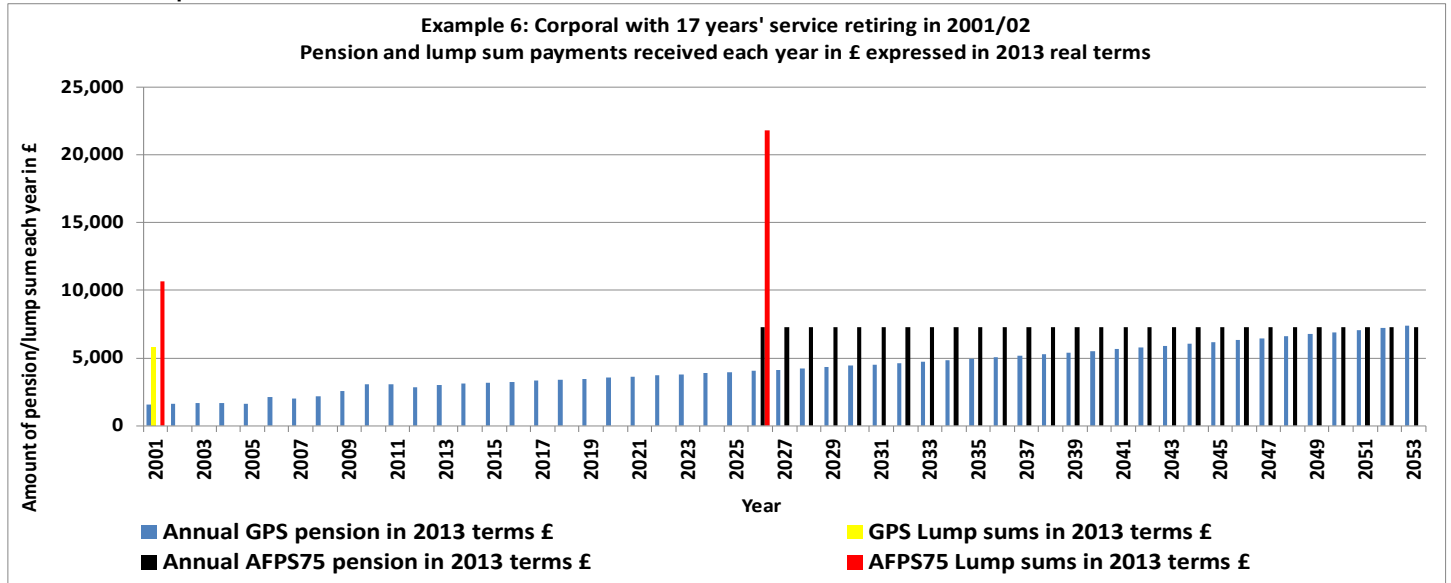


Chart A3 – Example 6

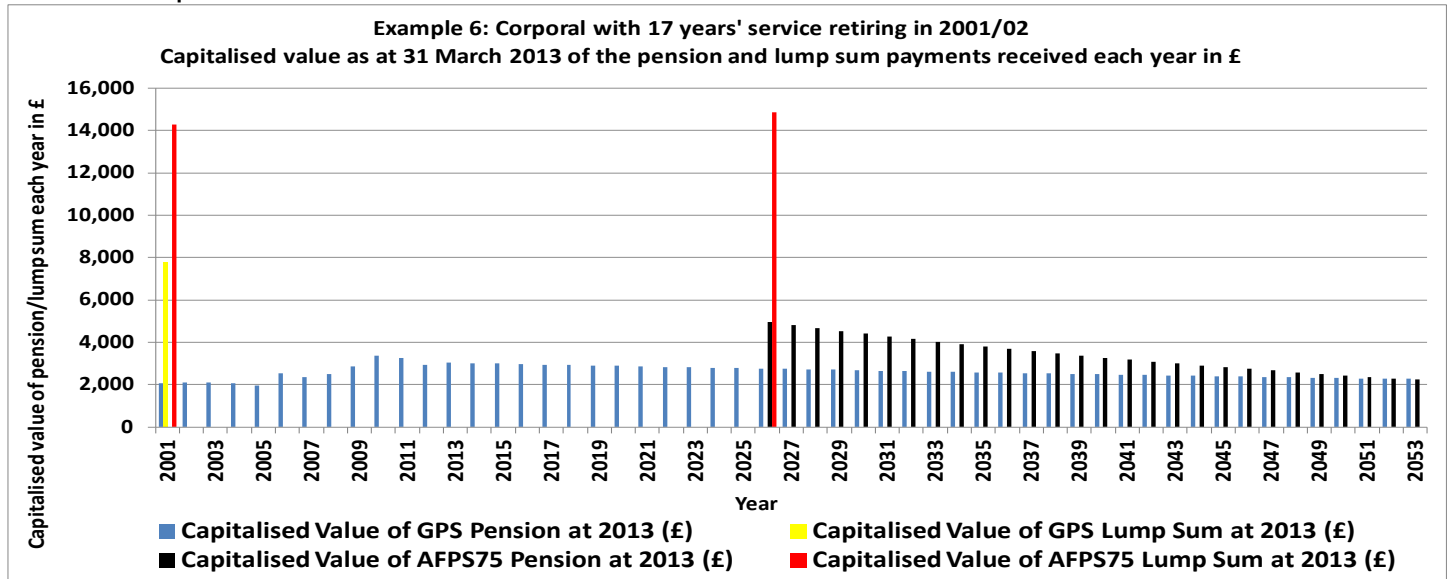
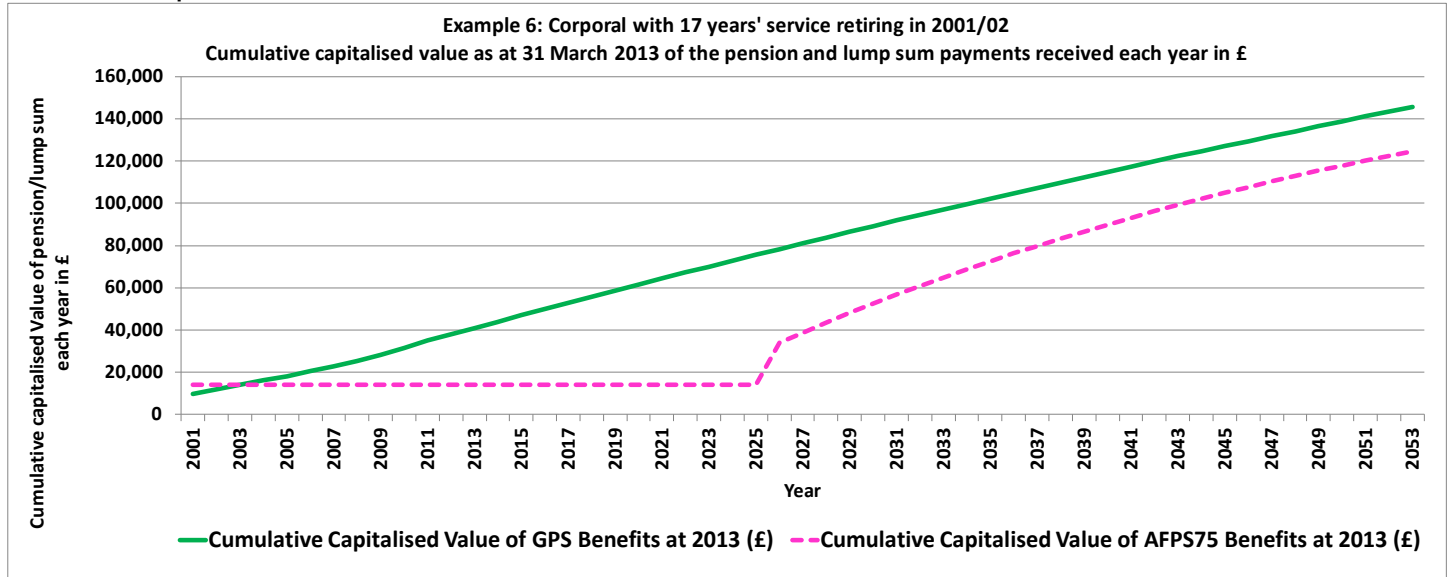


Chart A4 – Example 6



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 7: Private with 17 years' service retiring in 2003/04

Chart A2 – Example 7

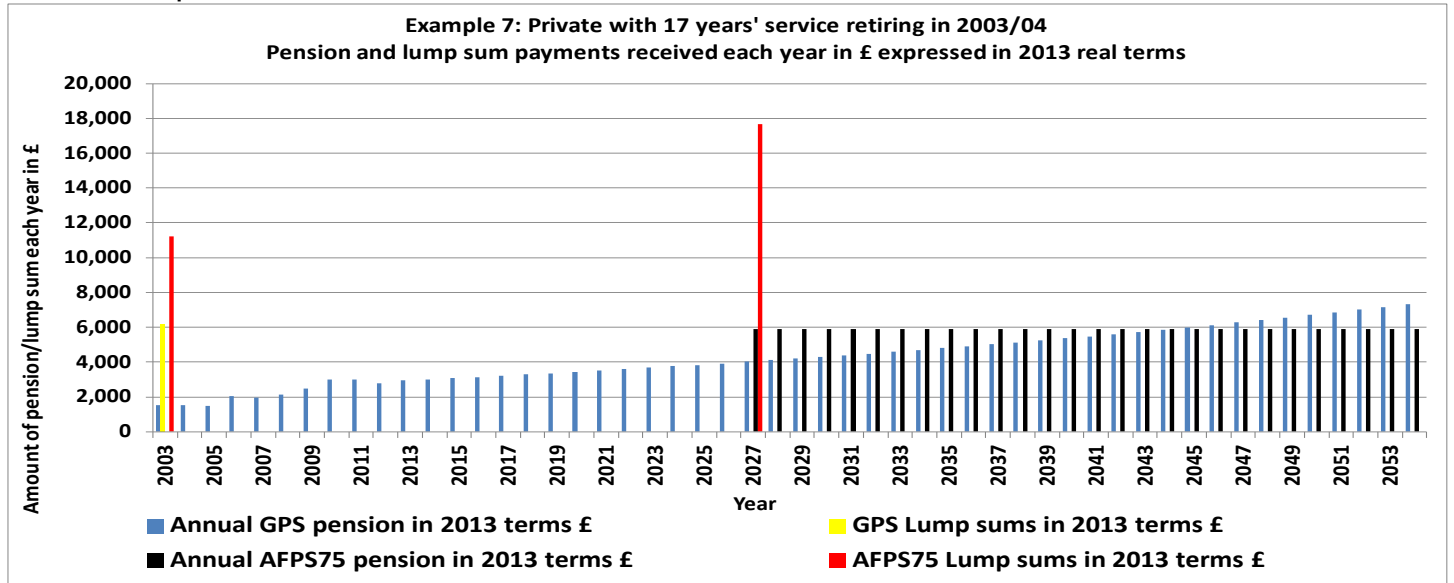


Chart A3 – Example 7

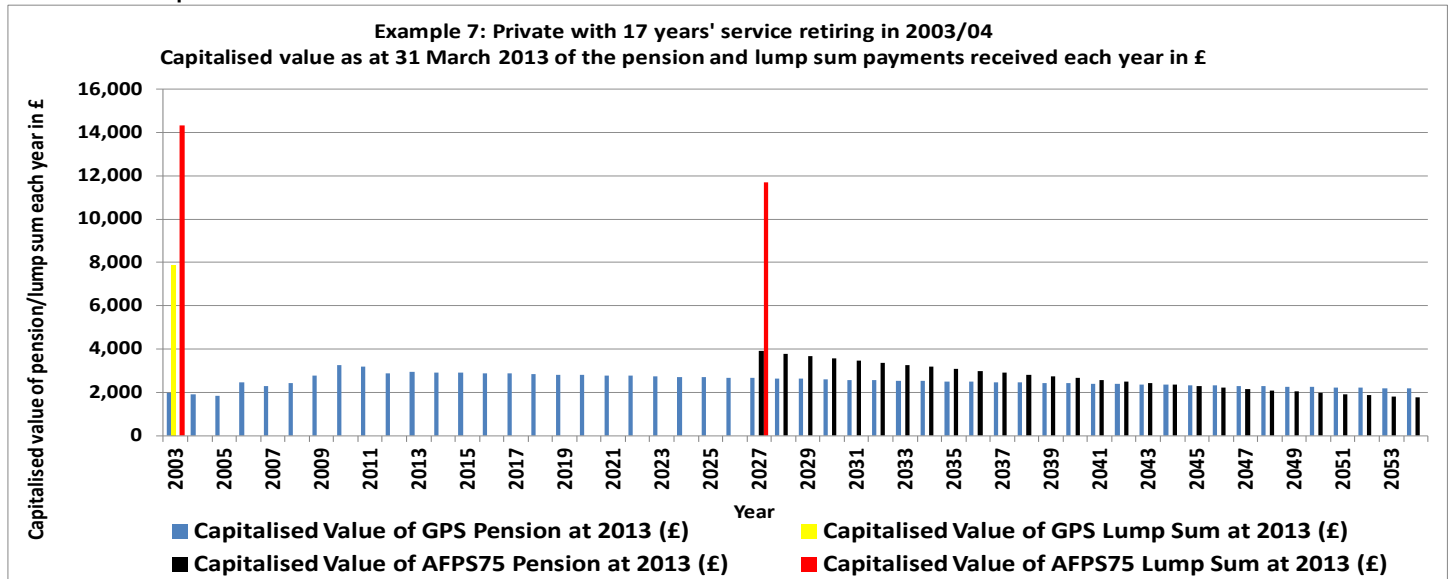
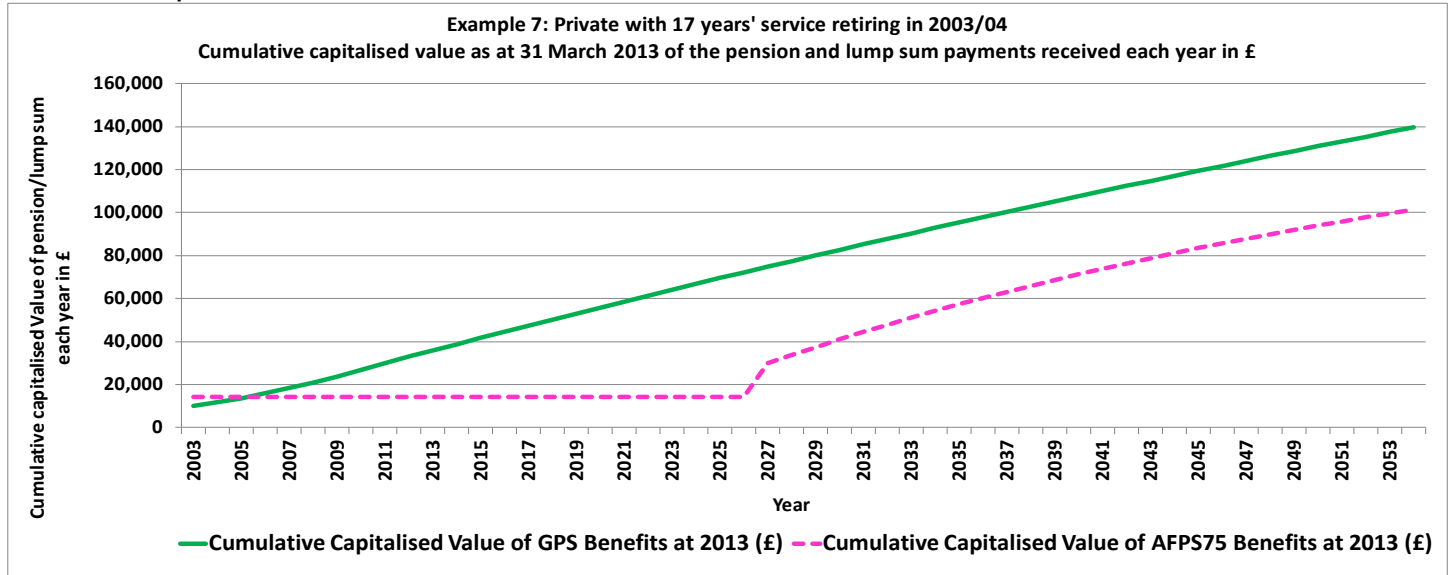


Chart A4 – Example 7



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 8: Lance Corporal with 16 years' service retiring in 2006/07

Chart A2 – Example 8

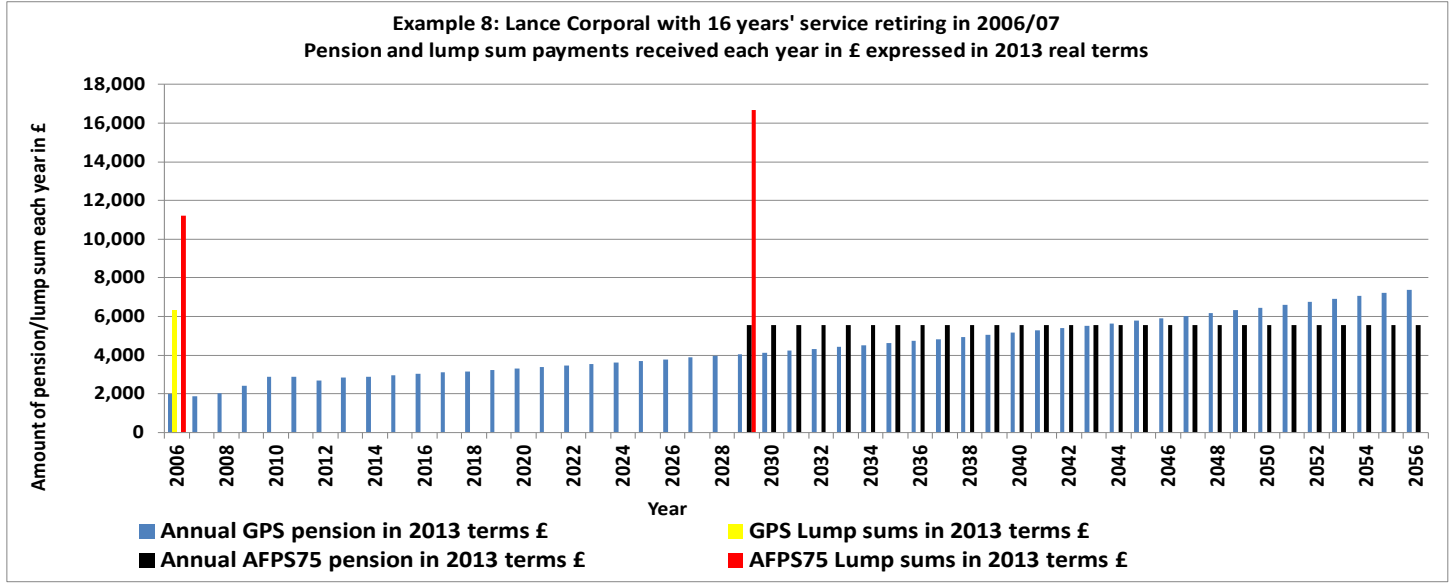


Chart A3 – Example 8

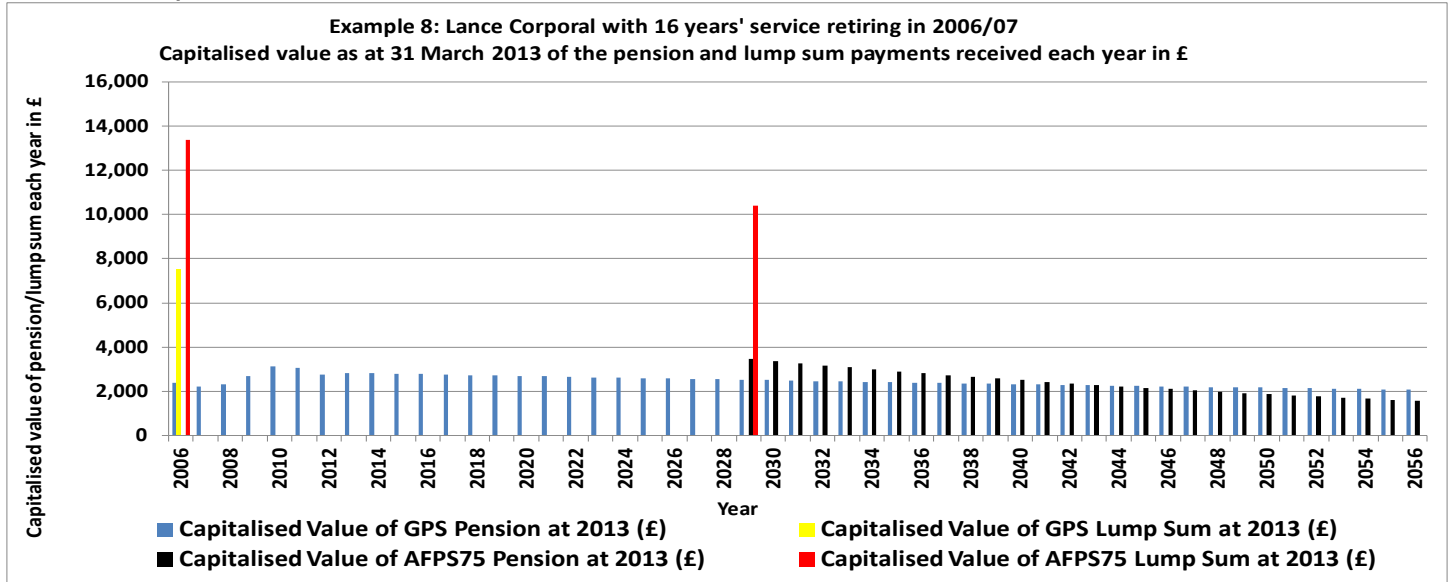
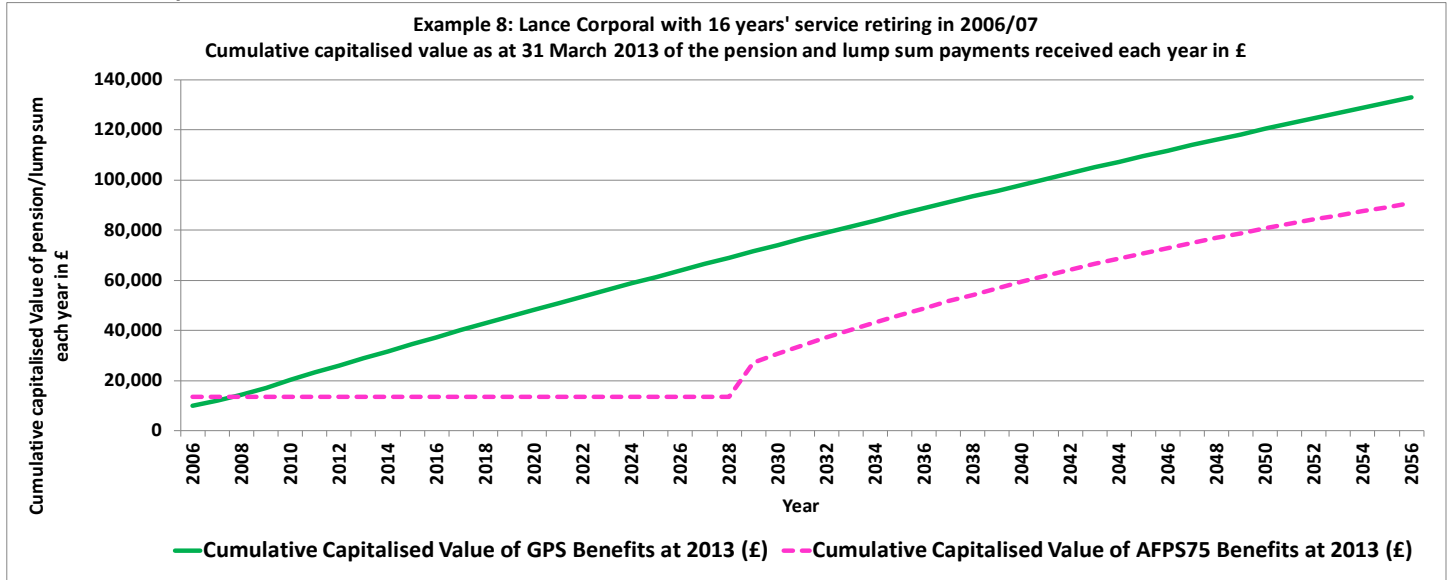


Chart A4 – Example 8



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 9: Warrant Officer 1 with 22 years' service retiring in 1997/98

Chart A2 – Example 9

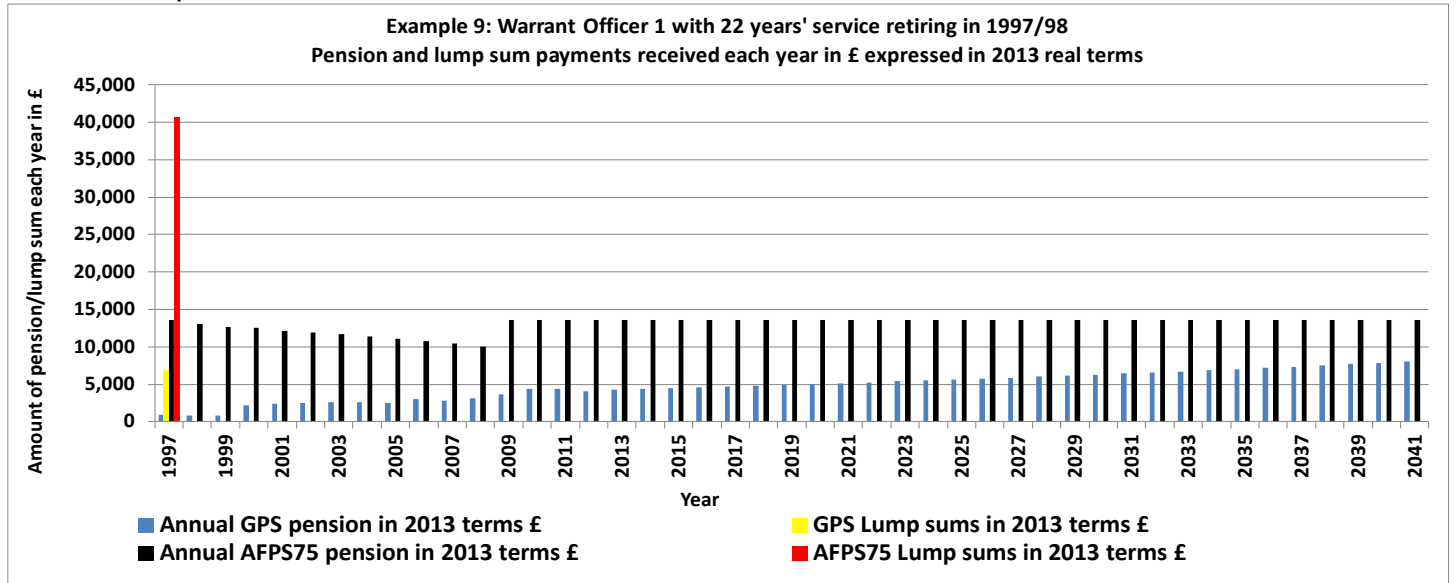


Chart A3 – Example 9

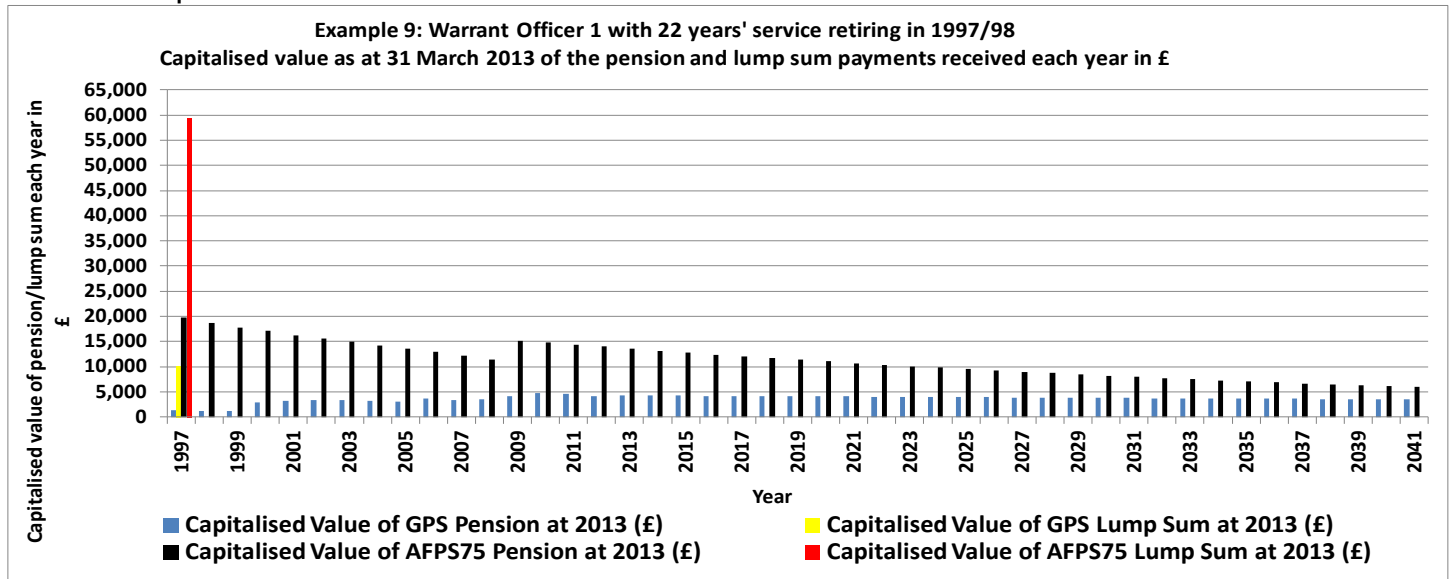
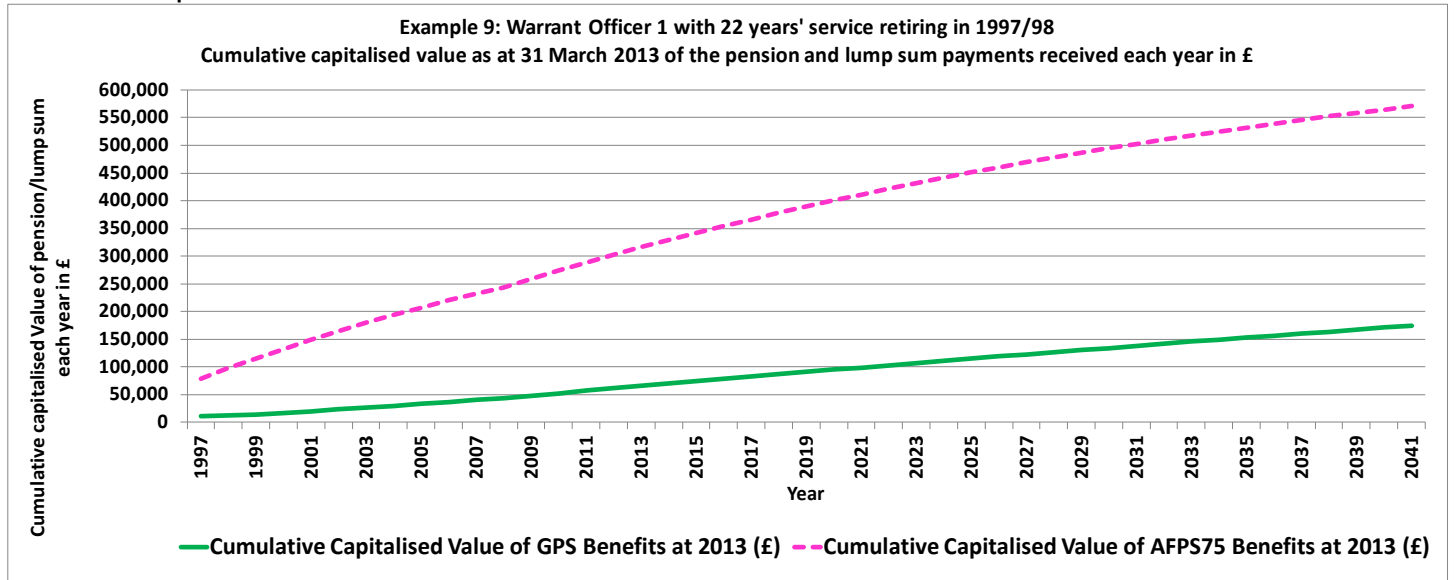


Chart A4 – Example 9



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Example 10: Lieutenant with 24 years' service retiring in 2001/02

Chart A2 – Example 10

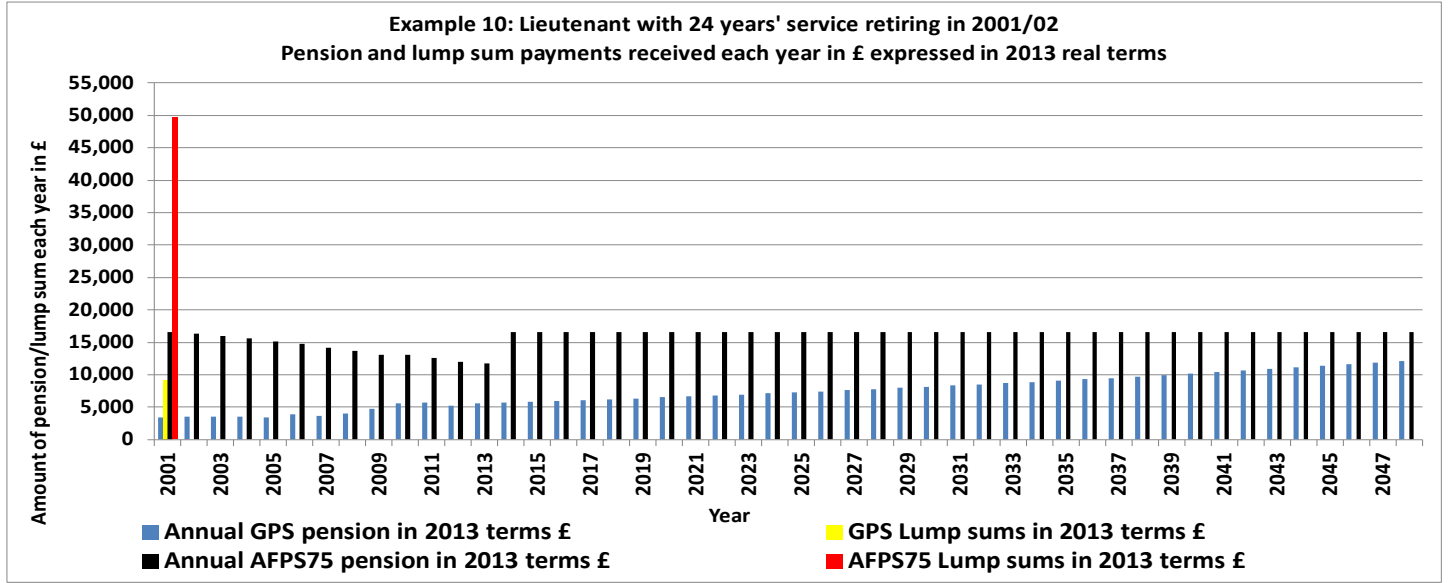


Chart A3 – Example 10

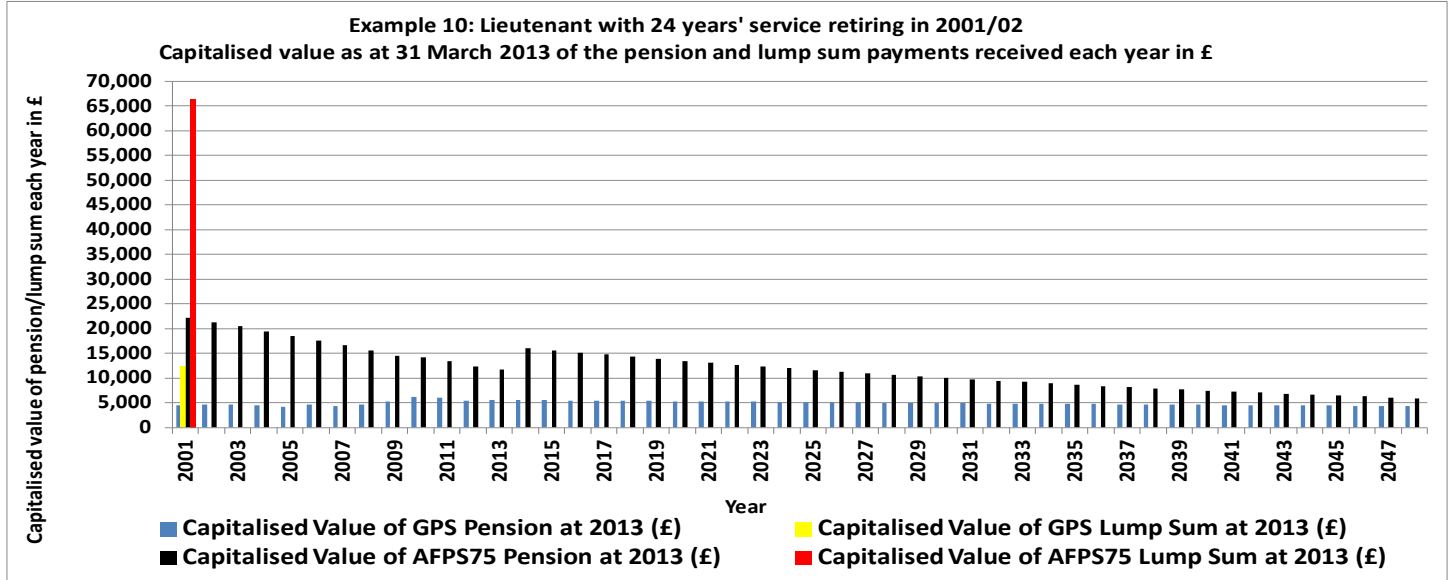
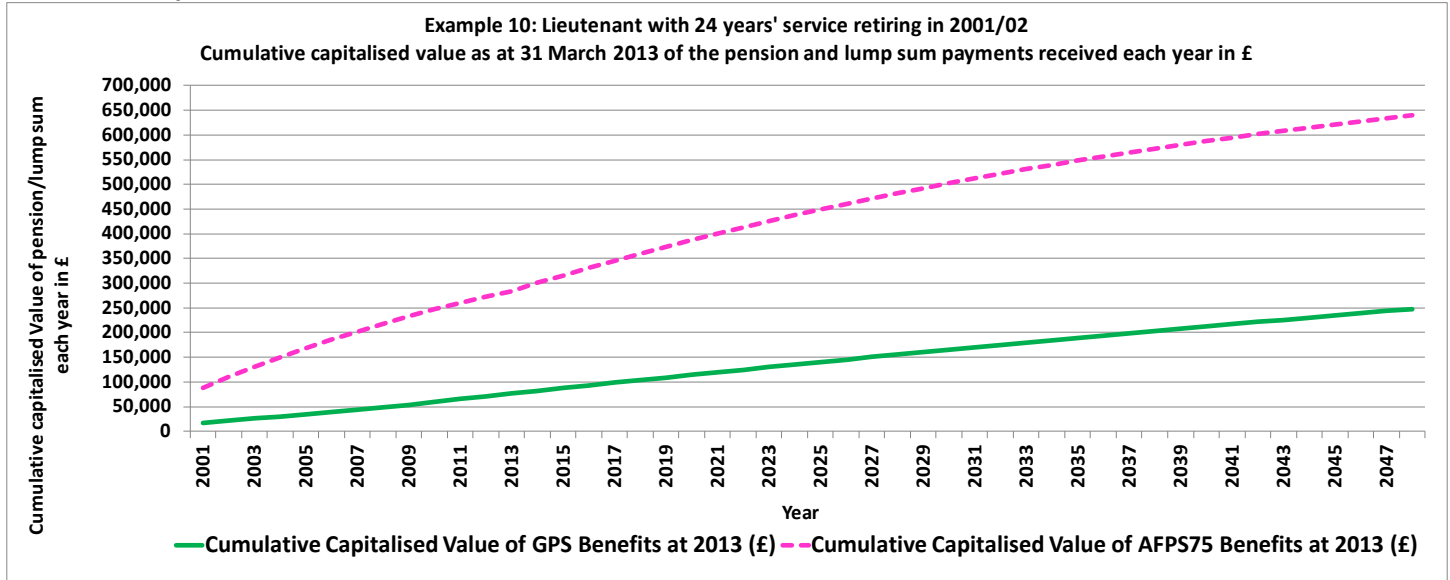


Chart A4 – Example 10



3 Data

- 3.1 This section describes the data used in the comparison of value assessment for the 10 example cases, and summarises the applicant data provided by MOD. Appendix B sets out details of the individual membership data used in each of the 10 example cases. Appendix C shows charts illustrating the retirement and service profiles of the identified applicants in the ECHR case and also sets out the detailed underlying applicant data.

Data used in Comparison of Value Assessment

- 3.2 The data used in this assessment has been provided by MOD. We have verified the data provided where possible, but for the majority of data items we have no independent source with which to check it against. Therefore, in general GAD has relied on the completeness and accuracy of the information supplied without independent verification. If the data is found to be incorrect then our analysis may not be valid and we would need to review our calculations and this report.
- 3.3 We are not aware of any other GPS pension benefits or AFPS75 pension benefits that should be included in the comparison exercise, other than those which are described below.

Membership Details

- 3.4 The MOD has provided us with the age, rank, service and retirement date for each of the 10 example cases. This is shown in Appendix B table B1.

GPS Pension Benefits

- 3.5 A summary of the GPS benefits considered in the example case comparisons are shown in Appendix D.
- 3.6 The normal GPS pension is a regular income stream that is payable for life immediately from retirement, if the member is deemed to have completed at least 15 years' service. The MOD has provided the monthly GPS pension amounts in Indian Currency Rupees (ICR) as at 1 April each year, from each member's retirement date to the year 2013/14. This should reflect the actual amounts that each member has received over the period since their retirement. The GPS pension amounts for each example case are shown in Appendix B table B2.
- 3.7 A GPS resettlement grant and a GPS retirement gratuity are also payable immediately upon exit (again if the member is deemed to have completed at least 15 years' service). The MOD has provided the actual GPS retirement gratuity and GPS resettlement grant in pound sterling for each member. We understand these amounts were actually paid in pound sterling and so the data provided should reflect the actual amounts received by the members. The GPS lump sums for each example case are shown in Appendix B table B3.
- 3.8 The benefits described above, and throughout this report, reflect those that we understand are currently payable from GPS to Queen's Gurkha Officers and Gurkha Non-Officers. We note that some members, for example Gurkha Commissioned Officers and Short Service Commission (Gurkha) Officers, may historically have had slightly different benefit entitlements. We do not believe that these differences affect the analysis in this report.

AFPS75 Pension Benefits

- 3.9 A summary of the AFPS75 benefits considered in the example case comparisons are shown in Appendix D.

- 3.10 The normal AFPS75 pension is a regular income stream that is payable either immediately on exit from service, or AFPS75 deferred pension benefits are payable from age 60 for service accrued before 6 April 2006. For service, accrued on or after 6 April 2006, the deferred pension benefits are payable from age 65. To be eligible to receive an immediate pension from AFPS75 an Officer has to have completed at least 16 years' service at exit from age 21; Non-Officers need to have completed at least 22 years' service at exit from age 18. For each example case the MOD has provided the annual AFPS75 pension amount in pound sterling that would have been payable upon retirement, either at deferred pension age or immediately upon exit, as appropriate. The AFPS75 pension amounts for each example case are shown in Appendix B table B4.
- 3.11 The AFPS75 terminal grant (which is typically 3 times the initial AFPS75 annual pension) is payable at the same time as the AFPS75 pension commences, which could be at the deferred pension age or immediately upon exit. Those Gurkhas who do not retire with an AFPS75 immediate pension also receive a resettlement grant that is payable at exit from service. The MOD has provided us with the amounts of the terminal and resettlement grants in each example case in pound sterling, and these should reflect the actual amounts that the example members would have received had they been in AFPS75 at the relevant time. The AFPS75 lump sum payments for each example are shown in Appendix B table B4.

UK Price Inflation

- 3.12 The MOD has provided historic annual UK price inflation increases from 1981 onwards. These are broadly in line with the Office for National Statistics Retail Price Index for increases before 2011 and then in line with the Consumer Price Index for increases after that. These increases have been selected in order to be equivalent to the annual increases that are applied to UK public service pensions in payment under the Pensions Increase Act. The UK price inflation increases for each year from 1981 onwards are provided in Appendix B table B5.

Exchange Rates

- 3.13 In order to compare the GPS pensions that are paid in Indian Currency Rupees with other benefits payable in pound sterling it is necessary to use an exchange rate to convert these payments. The MOD has provided exchange rate information to be used for this assessment. For annual periods from 1990 onwards we understand that the exchange rate used reflects the effective rate as at the 1st April at the start of the period. For earlier periods we understand that this information was not available. It was therefore necessary to adopt an exchange rate which we understand reflects the average exchange rate over the calendar year in which the annual period predominantly falls. We do not believe that the differences caused by using an average exchange rate or the exchange rate as at 1 April would materially change the overall pattern of the comparisons. The exchange rate information used for the assessment is shown in Appendix B table B5.

Applicant data

- 3.14 The MOD has informed us that there are 399 applicants involved in this ECHR Case. Of these applicants, we understand that the MOD has been able to identify pension records for 308 of the applicants on its administration systems.
- 3.15 The MOD has provided GAD with individual membership data on the 308 identified applicants. This data includes information on pension type, rank, date of birth, enlistment date, discharge date and years' service that the applicant's current pension was based on at exit. GAD has no independent way of checking this data and has therefore relied on the completeness and accuracy of the information supplied without independent verification.

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- 3.16 The MOD could not identify 91 of the applicants. Therefore, we have no information on the profile of these unidentified applicants. However, we have no reason to believe that they are not typical of the profile of the 308 identified applicants. If it becomes apparent that the unidentified applicants were all or mainly of a particular type, for example all Officers with more than 16 years' service, then this could affect the conclusions we have drawn from our analysis of the applicant profile.
- 3.17 The 308 applicants comprise 7 Officers and 301 Non-Officers.
- 3.18 The 7 Officers had all completed more than 16 years' service at exit. We would therefore have expected these 7 applicants to be entitled to immediate pension benefits upon exit from AFPS75 had they been members of that scheme.
- 3.19 5 of the 301 Non-Officers have had their GPS pension calculated using more than 22 years' service at exit. We would therefore have expected these 5 applicants to be entitled to immediate pension benefits in AFPS75 had they been members of that scheme.
- 3.20 The remaining 296 of the 301 Non-Officers have had their GPS pension calculated using less than 22 years' service at exit. We would therefore have expected most of these members to have been entitled to deferred pension benefits payable from age 60, and an immediate resettlement grant, had they been members of AFPS75. However some of these members may have been entitled to immediate pensions from AFPS75 if they fulfilled the relevant AFPS75 redundancy or ill-health criteria upon exit.
- 3.21 Out of the 308 applicants, the MOD has identified that 19 of the Non-Officers are receiving an ill health pension in the GPS. It is possible that some of these applicants would therefore have fulfilled the ill-health criteria in AFPS75 and so would have been eligible to receive an immediate pension from that scheme had they been members of it.
- 3.22 Out of the 308 applicants, the MOD has identified that 44 applicants received GPS benefits following redundancies (2 of whom are also ill health pensioners). We understand that these are applicants who have received a service credit of up to 3 years' additional service in GPS to get to the 15 years' service point. Whilst AFPS75 does not typically provide additional service to members leaving on redundancy, during most of the period under consideration it was typical for AFPS75 members to receive immediate benefits if they had served for 12 years up to the point of redundancy. It is therefore likely that a number of these applicants may have been eligible for immediate benefits from AFPS75 had they been members of that scheme.
- 3.23 Out of the 308 applicants, the MOD has identified 104 with condoned service (which we understand is deemed service that is credited to a Gurkha at exit). We have included condoned service in our analysis of the applicant data. In all 10 example cases the applicant is assumed to have equivalent service (including condoned service) for the purpose of calculating GPS and AFPS75 benefits, with the exception of service prior to age 21 not being reckonable for Officer pensions' in AFPS75. This approach is illustrative and is not intended to restrict any possible future MOD policy decisions regarding this form of service.

4 Methodology

- 4.1 We have been asked to compare the pension benefit payments received by members of the GPS against the pension benefit payments that the Gurkhas would have received from the AFPS75, had they been members of that scheme, throughout their expected lifetimes. This comparison has been carried out for 10 example cases (varying by rank, retirement year, service and age at exit) that the MOD has selected from the list of applicants in the ECHR case.
- 4.2 We understand that the examples were selected to demonstrate the range of results from the benefit value comparisons across the 308 applicants.
- 4.3 The comparison has been carried out as at 31 March 2013. It compares the benefits, described below in paragraphs 4.4 and 4.5 that are expected to be received during each annual 1 April to 31 March period.
- 4.4 The GPS pension benefits included in this comparison reflect the members' rank and service at retirement, and are:
 - The annual GPS pension payments payable from retirement;
 - The GPS death cum retirement gratuity payable on retirement; and
 - The GPS resettlement grant payable on retirement.

The GPS pension benefits used in each example case are set out in Appendix B.

- 4.5 The AFPS75 pension benefits included in this comparison reflect the members' rank and service at retirement, and are:
 - The annual AFPS75 pension payments payable from retirement;
 - The AFPS75 terminal grant payable on retirement which is equivalent to 3 times the initial annual AFPS75 pension; and
 - The AFPS75 resettlement grant payable at exit (if entitled).

The AFPS75 pension benefits used in each example case are set out in Appendix B.

- 4.6 When carrying out our calculations, we have compared the amounts that we understand would have been payable under the scheme rules of the GPS and AFPS75 in force at the time of retirement. We understand that the relevant benefits for this comparison, in GPS and AFPS75, have not changed materially in structure over the period covered by the retirement dates of the example cases i.e. from 1981/82 to 2006/07. Summaries of the scheme benefits are provided in Appendix D. If the scheme rules are found to treat benefits differently than assumed (as summarised in Appendix D) during the period 1981/82 to 2006/07, then our analysis may not be valid and we would need to review our calculations and this report.
- 4.7 For Non-Officers with less than 22 years' service at exit we compare the GPS pension benefits, both pension and lump sums, that are payable immediately against an AFPS75 resettlement grant payable immediately and a deferred pension and terminal grant payable from age 60 in AFPS75.
- 4.8 For Non-Officers with 22 years' or more service at exit we compare the GPS pension benefits, both pension and lump sums, that are payable immediately against a pension and terminal grant payable immediately in AFPS75. The AFPS75 pension has no pension increases applied until age 55, whereas the GPS pension has increases applied immediately.
- 4.9 For an Officer with 16 years' or more service at exit we compare the GPS pension benefits, both pension and lump sums, that are payable immediately against a pension and terminal grant payable immediately in AFPS75. The AFPS75 pension has no pension increases applied until age 55, whereas the GPS pension has increases applied immediately.

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- 4.10 When assessing the benefits that would have been payable from AFPS75, we have assumed that the career paths followed by the example Gurkhas would have remained unchanged had they had access to that scheme. This is because the MOD have instructed us that even if a Gurkha had access to AFPS75, most would not have been allowed to extend their service to the 22 years required to reach the AFPS75 Non-Officer immediate pension point. If this was not the case then this could lead to different results for the example cases and for the conclusions we have drawn from our analysis of the applicant profile. For the avoidance of doubt, no allowance has been made for any behavioural effects that may have arisen from the different benefit entitlements of AFPS75 compared with GPS.
- 4.11 The AFPS75 pension increases in payment each year in line with the relevant increase in UK price inflation (currently based on the Consumer Price Index (CPI)). An AFPS75 pension payable on normal health grounds has no pension increases applied until age 55. The GPS pension increases in payment each year in line with an index, which we understand broadly reflects increases in earnings. In both cases our comparison of the pension benefits has made allowance for increases of benefits in payment, both historically and during periods after the effective date of the calculations.
- 4.12 No allowance has been made for any dependants'/spouses'/civil partners' benefits in the comparisons. This has been done for simplicity and is not expected to materially change the outcome of the relative comparison of benefit values between GPS and AFPS75.
- 4.13 No allowance has been made for any options available under either of the GPS or AFPS75. For example, no allowance has been made for members to exercise the option to commute part of their pension for a larger lump sum in either scheme. This has been done for simplicity and is not expected to materially change the relative comparison of benefit values.
- 4.14 No allowance is made for tax in the comparisons.
- 4.15 We have made no adjustment for the interaction with state benefits either for Gurkhas resident in Nepal or in the UK.
- 4.16 GPS pensions are payable in Indian Currency Rupees, whilst AFPS75 pensions are payable in pound sterling. There is an argument that an adjustment could be made to the calculations in this report to allow for the relative difference in the cost of living between the respective countries that those receiving benefits from each scheme might live in. However, in the calculations produced in this report we have not made any allowance for differences in the cost of living.
- 4.17 The Armed Forces Pension Scheme 2005 (AFPS05) was introduced from 6 April 2005. Serving members of AFPS75 who remained in service to 6 April 2006 were given the option to transfer to AFPS05 on 6 April 2006 but the majority remained in AFPS75. The majority of the applicants left service before 6 April 2006 and would not have been entitled to transfer to AFPS05 under the offer to transfer. Therefore, we have not allowed for AFPS05 offer to transfer in our analysis.
- 4.18 For each example case we have undertaken two comparisons. The first is a comparison of the benefits payable from each scheme in real 2013 pound sterling price terms. Because the benefits payable from each scheme differ in timing as well as amounts we have then carried out a second comparison of the benefits in terms of 2013 capitalised values using a discounting process. The following sections provide details of each approach.

Approach to calculating the benefit amounts in real 2013 pound sterling price terms

- 4.19 To compare the real 2013 pound sterling price terms amounts of benefits we have undertaken the following process:
- 4.20 The monthly GPS pension in ICR as at 1 April each year is multiplied by 12 to get an annual equivalent GPS pension in ICR. The annual pension in each year is then converted from Indian currency rupees into pound sterling using the assumed exchange rates in force at that time. The historic exchange rates used are set out in Appendix B table B5. For periods after 2013 we have used the exchange rate from 1 April 2013.

- 4.21 To calculate the real 2013 price terms amount of each payment each GPS pension amount received before 2013 is increased by UK price inflation to reflect the change in prices from that date to 2013. For future GPS payments we project the 2013 payment amount forwards to each future year at the assumed real earnings increase rate of 2.25% per annum (i.e. assumed salary increases less assumed CPI inflation). This gives the GPS pension payments that are expected to be received each year, throughout a Gurkha's lifetime, expressed in real 2013 pound sterling price terms.
- 4.22 The GPS lump sums, the resettlement grant and death cum retirement gratuity, were provided in pound sterling amounts at the time of retirement. These lump sum payments are therefore increased by UK price inflation from the year of payment to 2013. This gives the GPS lump sum payments that were received at retirement expressed in real 2013 pound sterling price terms.
- 4.23 The AFPS75 pension was provided in pound sterling amounts at the time of exit. This pension was increased by UK price inflation from the year of exit to 2013 to obtain the pension that would have been received in each year from retirement in real 2013 pound sterling price terms. The AFPS75 pension is expected to increase in line with UK price inflation in the future. Therefore, the future projected payments remain constant in real 2013 pound sterling price terms.
- 4.24 The AFPS75 lump sums, the terminal grant and resettlement grant, were provided in pound sterling amounts at the time of exit. These lump sum payments were increased by UK price inflation from the year of exit to 2013. This gives the AFPS75 lump sum payments that would have been received at exit and retirement expressed in real 2013 pound sterling price terms.
- 4.25 The pattern of the cash payments in real 2013 pound sterling price terms, expected to be payable throughout a Gurkha's lifetime, from GPS and AFPS75 are illustrated in the charts labelled A2 in section 2 of the report.

Approach to calculating the capitalised value as at 31 March 2013

- 4.26 The aim of calculating a capitalised value is to give a means of comparing benefit payments made in different time periods, allowing for the time value for money. To obtain the capitalised value, as at 31 March 2013, of each GPS or AFPS75 payment before 2013, we take each payment, either pension or lump sum, expressed in 2013 pound sterling price terms (as described above) and add interest to the payments from the relevant date to 2013. Interest is added at an assumed real interest rate, 2.25% per annum above UK Retail Price Index (RPI) inflation up to 2011 and 3% per annum above UK CPI inflation from 2011.
- 4.27 To obtain the capitalised value, as at 31 March 2013, of each GPS or AFPS75 payment after 2013, we take each payment, either pension or lump sum, expressed in 2013 pound sterling price terms (as described above) and discount each projected future payment back to 2013 at an assumed real interest rate of 3% per annum above UK CPI inflation.
- 4.28 The pattern of the capitalised value of the payments as at 31 March 2013 in pound sterling price terms, taking each payment expected to be payable throughout a Gurkha's lifetime, from GPS and AFPS75, are illustrated in the charts labelled A3 in section 2 of the report.
- 4.29 The total capitalised value as at 31 March 2013 is the sum of the individual capitalised value of all payments, both pension and lump sum, received throughout a Gurkha's expected lifetime from the respective scheme. The charts labelled A4 in section 2 of the report illustrate the build up of the capitalised value over time by showing the cumulative capitalised value in each scheme by year. Table A1 in Appendix A summaries the total capitalised value as at 31 March 2013 of the GPS and the AFPS75 benefits for each example case.

Gurkha Offer To Transfer (GOTT)

- 4.30 Around March 2008 Gurkha pensioners with post 1 July 1997 service were offered the option to transfer to either the AFPS75 or AFPS05 whichever scheme they were eligible to join under the terms of the GOTT (i.e. those who joined GPS before 6 April 2005 could either opt to transfer to either AFPS75 or AFPS05 since they would have been eligible for the Offer to Transfer to AFPS05, whereas those who joined GPS after 6 April 2005 could only transfer to AFPS05) or remain in GPS. All service, on or after 1 July 1997, was converted on a year for year basis. Service before 1 July 1997 was converted on an actuarial value basis.
- 4.31 If we were to allow for the GOTT option in the comparison then we would compare what the Gurkha would expect to receive under the GPS and/or the GOTT as appropriate with what the Gurkha would expect to receive under AFPS75 over the period since exit. For those who opted to transfer to AFPS75 we would typically expect the value of the GOTT option to be higher than the value of the GPS but this would depend on the assumptions adopted.
- 4.32 Examples 6, 8 and 10 opted to transfer to AFPS75. Examples 1 to 4 and example 9 were not eligible for the GOTT because they left GPS before 1 July 1997. Examples 5 and 7 were eligible for the GOTT but chose not to transfer from GPS. For the purpose of this report we have been asked to compare the value of the GPS benefits with the value of the AFPS75 benefits. Therefore, we have not allowed for the GOTT in our comparisons.

5 Assumptions

- 5.1 This section describes the assumptions we have adopted in the comparison calculations for the 10 example cases.

Financial assumptions

- 5.2 The main financial assumptions used for the assessment are those being used to assess employer contribution rates to public service pension schemes including the AFPS. These are summarised below:

The rate of return (nominal discount rate)	5.00% pa
The rate of return in excess of:	
CPI Inflation Increases	3.00% pa
RPI Inflation Increases	2.25% pa
The rate of earnings growth in excess of:	
CPI Inflation Increases	2.25% pa

- 5.3 We have assumed CPI inflation will average 2.0% per annum in the long term and that RPI inflation will average 0.75% per annum in excess of CPI inflation in the long term i.e. 2.75% per annum.
- 5.4 When calculating capitalised values, all pensions and lump sums have been rolled up/discounted at a real rate of 2.25% per annum above UK RPI Inflation up to 2011 and 3% per annum above UK CPI inflation from and including 2011. We have adopted UK RPI up to 2011 and UK CPI from and including 2011 as these inflation indices are used for increasing UK public service pensions in payment. Other approaches could be adopted to allow for purchasing power but we do not think that this is significant in the comparison.
- 5.5 If a higher real discount rate were adopted the capitalised value of the past payments would be correspondingly higher and the capitalised value of the future payments would be correspondingly lower, and vice-versa for a lower real discount rate. The sensitivity of this assumption is illustrated in section 7 and this shows that the real discount rate assumption doesn't materially affect the overall comparison of the example cases.
- 5.6 We assume that average earnings inflation is 2.25% per annum above CPI inflation in the long term. Therefore, the assumed nominal rate of salary growth is 4.25% per annum. GPS pension payments are assumed to increase in line with assumed average earnings increases in the future because we understand that GPS pension increases in payment each year in line with an index which reflects Nepalese inflation and is reviewed periodically against pay levels. We understand that in the long term this indexation approach broadly reflects increases in Nepalese and Indian Earnings. We would expect that pay increases in the long term would be higher than inflation.
- 5.7 If a higher real earnings increase assumption were adopted the future GPS pension payments would be correspondingly higher, and vice-versa for a lower real earnings increase rate. The sensitivity of this assumption is illustrated in section 7 and this shows that the real earnings growth rate assumption has a greater impact on the results than the change in the real discount rate but it doesn't significantly affect the overall comparison of the example cases.

Demographic assumptions

- 5.8 Historical analysis of the AFPS75 has shown that life expectancy differs between Officers and Non-Officers with Officers expected to live for longer on average than Non-Officers. Therefore, in this exercise we have also adopted different life expectancies for Officers and Non-Officers. For simplicity, we have assumed a single age of death; for Officers we assume this is 89 years old and for Non-Officers we assume this is 87 years old.
- 5.9 It could be argued that the life expectancy for an individual residing in Nepal might be less than the life expectancy of an individual residing in the UK. However, the MOD has suggested that applicants are more likely to experience mortality rates similar to those of a regular UK Officer/Non-Officer in AFPS75. Therefore, we have adopted life expectancies that are consistent with those we have previously adopted for AFPS75 Non-Officer and Officer pensioners aged 60 in 31 March 2013 (these life expectancies were published in the 2013 AFPS accounts). Even if we had chosen to adopt an assumption which reflected a shorter life expectancy, the overall comparison for the example cases wouldn't change significantly. This is illustrated, in the charts labelled A4 in section 2 of the report, by the fact that the green line and pink dashed line are generally a similar distance apart throughout the last 20 to 30 years of an individual's expected lifetime.
- 5.10 For reasons of simplicity we have not allowed for dependants' benefits in the example cases. If we had allowed for dependants' benefits then we may expect on average that the benefits would have been paid over a longer period than that assumed for the example cases. However, because the results are not sensitive to this assumption we do not believe, even allowing for the difference in the percentage of the members pension in each scheme, it would materially affect the results.
- 5.11 If shorter life expectancies were adopted there would be correspondingly fewer future payments taken into account in the comparison and vice-versa if longer life expectancies were adopted. However, we believe this assumption is reasonable because we do not believe it affects the conclusions drawn from our analysis since the difference in projected payments between the two schemes are relatively small by the time a pensioner reaches age 80 or similar.
- 5.12 We assume that all applicants experience future mortality in line with typical normal health pensioners. No allowance has been made for ill health pensioners who may as a group die earlier than normal health pensioners.

Other assumptions

- 5.13 The following simplifying assumptions have been made when calculating the comparative values. These assumptions are not expected to materially change the overall pattern of the comparisons:
- 5.14 The exchange rate used to convert future GPS payments is the ICR: £ exchange rate as at 1 April 2013. Any differences in price inflation in different countries might reasonably be expected to be reflected through changes in the relative exchange rates over the long term.
- 5.15 All GPS and AFPS75 payments, both pension and lump sum, are assumed to be payable at the start of each year.
- 5.16 For the year (1 April to 31 March) in which the Gurkha retires, it is assumed that a full annual pension payment is received i.e. no allowance is made for a proportion of the full annual pension.

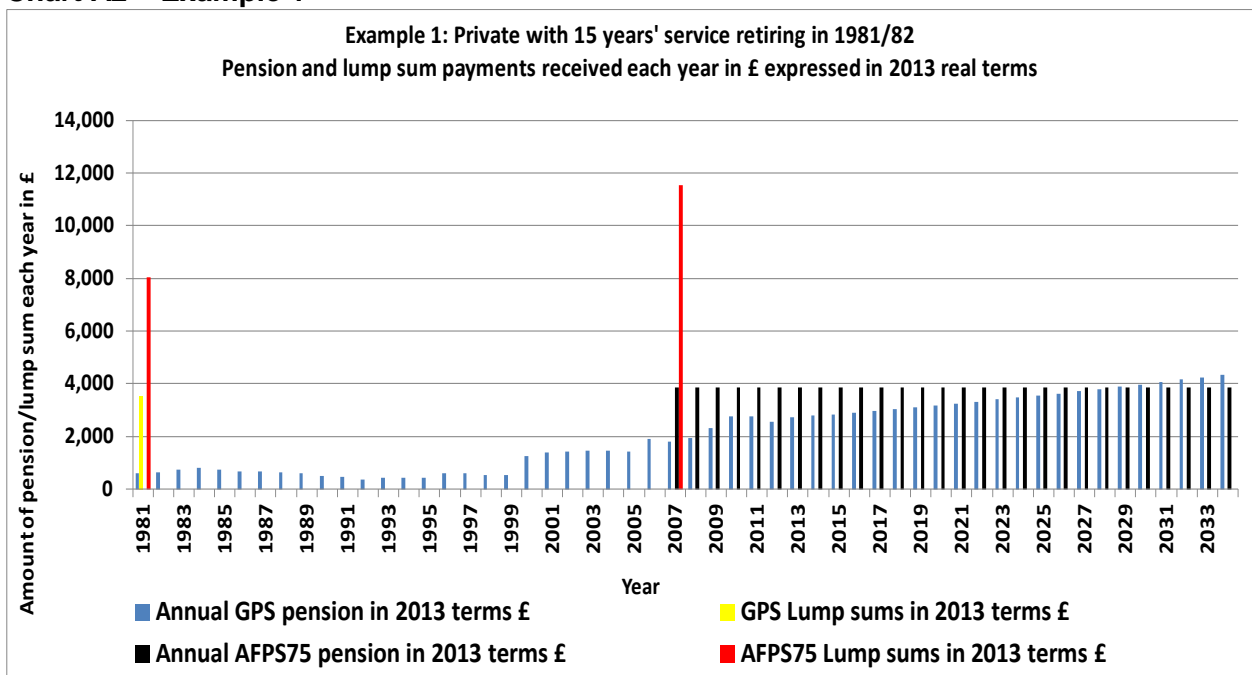
Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

- 5.17 We assume that a full annual pension increase or earnings increase is applied at the end of each year.
- 5.18 The monthly GPS pension in ICR at 1 April each year is used to determine an annual equivalent GPS pension in each year. We do not allow for any increases in the pension rates at other points throughout the year.
- 5.19 The AFPS75 pension and lump sums provided by MoD are the AFPS75 pension benefits payable that are effective at the retirement date.
- 5.20 We have assumed for Non-Officers that they die at the end of the year in which they reach age 87 and for Officers we assume that they die at the end of the year in which they reach age 89. Therefore, in the last year we assume a full annual pension payment is received i.e. no allowance is made for a proportion of the full annual pension if the Gurkha was to reach 87/89 part way through the year.
- 5.21 In AFPS75 deferred pension benefits are payable from age 60 for service accrued before 6 April 2006. For service, accrued on or after 6 April 2006, the deferred pension benefits are payable from age 65. In our calculations we have assumed that all AFPS75 deferred pension benefits come into payment at age 60, even where some benefits may not actually be payable until age 65. This assumption only affects example 8, who has a small amount of service earned on or after 6 April 2006. If this was allowed for it would slightly reduce the value of the AFPS75 benefits because the payments would be made further into the future and therefore discounted over a longer period.
- 5.22 When determining the AFPS75 pension entitlement and benefit amount we have used the same service that is used to determine the GPS pension in most cases. The only exception to this is that we have assumed that only service from age 21 for Officers and only service from age 18 for Non-Officers would count towards the eligibility and the actual benefit amount payable in AFPS75.

6 Results

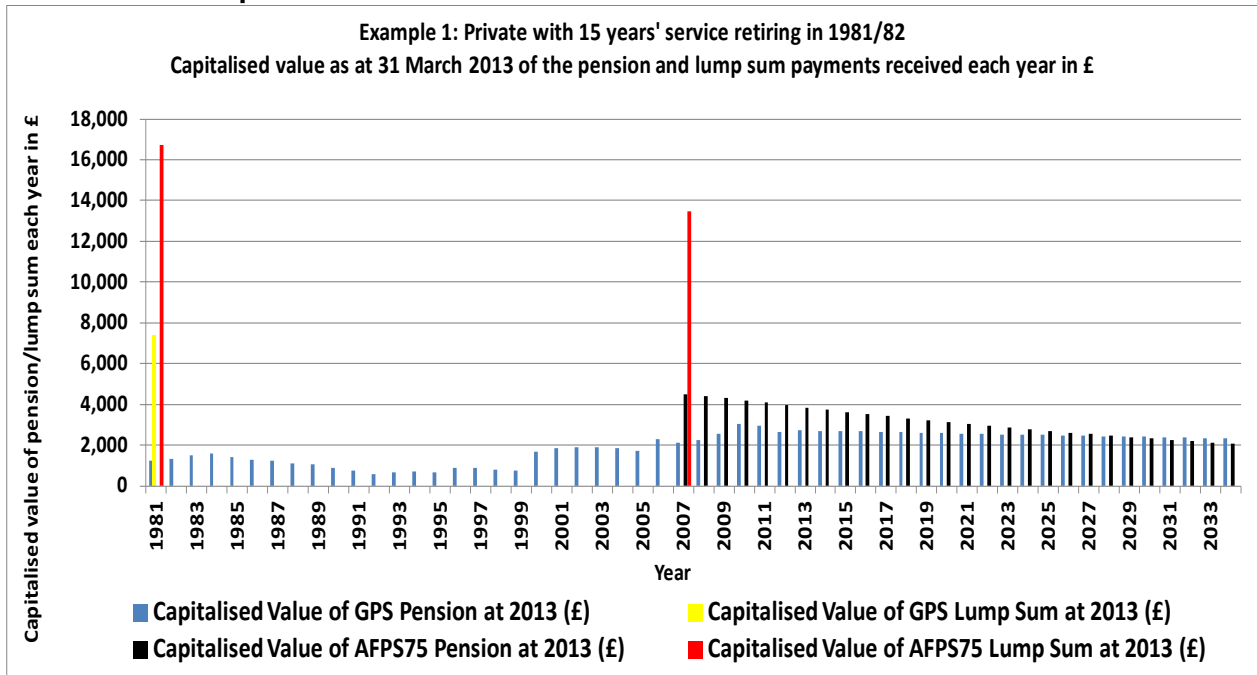
- 6.1 This section summarises the results from the 10 example cases for which we have compared the value of the GPS pension and lump sum benefits with the value of the AFPS75 pension and lump sum benefits throughout the Gurkha's lifetime. We also comment on our analysis of the profile of the 308 identified applicants and how it relates to the 10 example cases. When drawing any conclusions from this analysis it is important to recognise that we have only considered the profile of the 308 applicants for whom MOD has been able to identify pension records, and not the wider GPS population. Therefore, any conclusions drawn here cannot automatically be assumed to apply to the whole GPS population.
- 6.2 For each example case we compared the stream of benefit payments that the Gurkha may receive from the GPS with the stream of benefits payments that the Gurkha would expect to receive from the AFPS75, had they been eligible for that scheme, from retirement throughout their lifetime.
- 6.3 In example 1, a Private with 15 years' service at exit retiring in 1981/82, we compare the GPS pension benefits, both pension and lump sums, that are payable immediately against an AFPS75 resettlement grant payable immediately and a deferred pension and terminal grant payable from age 60 in AFPS75.
- 6.4 Chart A2 illustrates for this example the pound sterling amounts that the Gurkha would expect to receive in each year in real 2013 price terms.

Chart A2 – Example 1



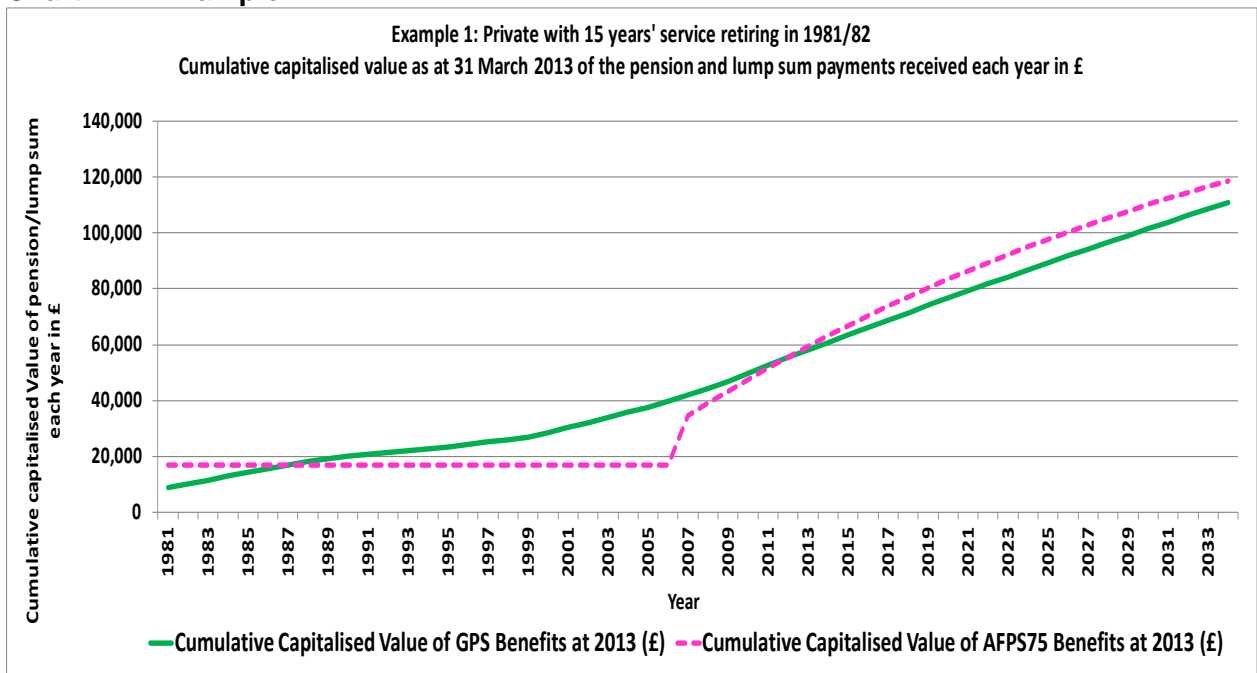
- 6.5 For example 1, it shows that the Gurkha will have already received nearly 30 years of pension payments and his GPS lump sums before the majority of the AFPS75 pension benefits become payable.
- 6.6 In order to compare the value of the benefits in both schemes we need to make allowance for the time value of money, by applying interest in each year for each payment. Chart A3 illustrates the payments allowing for interest in each year i.e. the capitalised values of the payments.

Chart A3 – Example 1



- 6.7 The lump sum payments received on exit (yellow bar and red bar in 1981) will have around 30 years of interest added to them and therefore these payments will have a greater capitalised value than if they had been received more recently. The payments assumed to be made at points further into the future will have more discounting applied, and therefore the capitalised value of those payments will be lower than if those payments had been received just after 2013.
- 6.8 To illustrate how the capitalised value of pension benefits in each scheme builds up over time we have produced a chart showing the change in the cumulative capitalised value of the benefits received over the assumed lifetime.

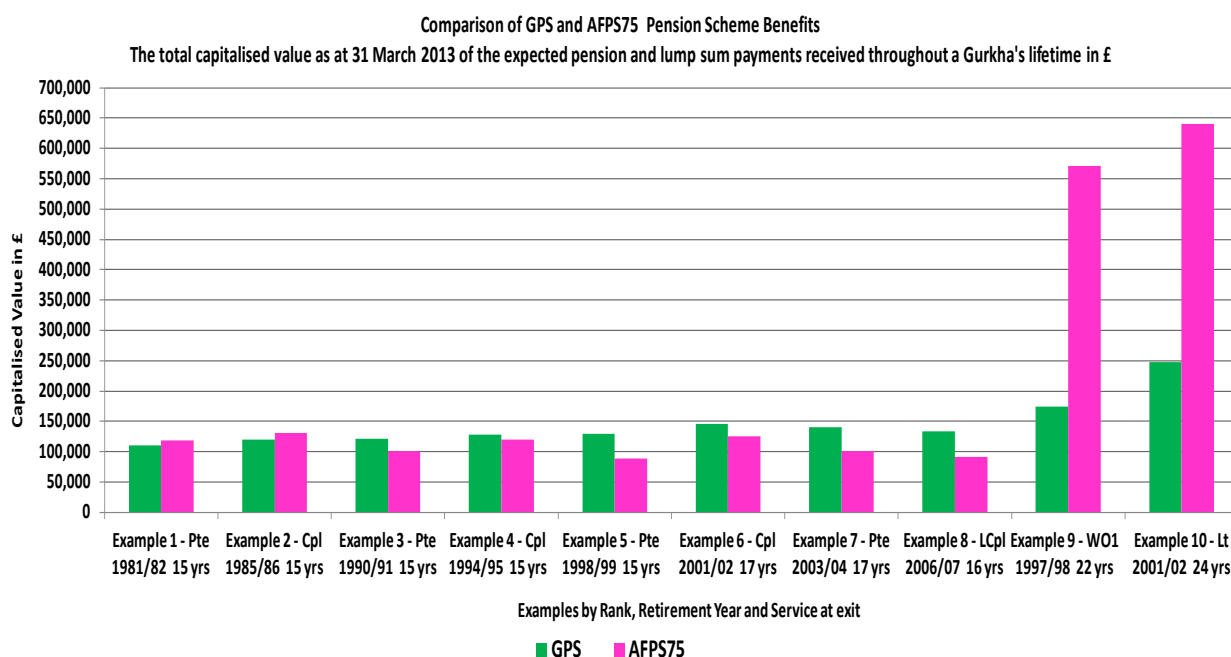
Chart A4 – Example 1



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

- 6.9 Chart A4 shows, for example 1, the point at which the assessed capitalised value of GPS benefits is equivalent to the assessed capitalised value of AFPS75 benefits. This point is identified where the green line crosses the pink dashed line.
- 6.10 In this case the assessed capital value of the AFPS75 benefits is initially greater than that of the GPS benefits due to the value of the resettlement grant paid on exit being greater than the value of the GPS lump sums. We then see that the value of the GPS exceeds the assessed value of the AFPS75 for a period during which the member is receiving a GPS pension but not an AFPS75 pension. The increase in the AFPS75 capitalised value (the pink dashed line) in 2007 is because the AFPS75 pension and terminal grant begin to be paid from this point. The difference in the pink dashed line and green line at the far right hand side of the chart indicates the difference in the total capitalised value of the GPS and AFPS75 benefits expected to be received throughout the example member's expected lifetime. In example 1 we see that the AFPS75 pension benefits have a slightly higher overall assessed capitalised value than the GPS pension benefits.
- 6.11 Similar charts have been produced for each of the 10 example cases, which are shown in section 2 of the report.
- 6.12 The total capitalised value of the benefits in each scheme for each of the 10 example cases are shown in Appendix A. Chart A1 below summarises these results. The green bars show the total capitalised value of the GPS benefits and the pink bars show the total capitalised value of the AFPS75 benefits for each of the 10 example cases. The green bar in chart A1 corresponds to the end point of the green line shown at the far right hand side in the charts labelled A4 in section 2. The pink bar in chart A1 corresponds to the end point of the pink dashed line shown at the far right hand side in the charts labelled A4 in section 2.

Chart A1

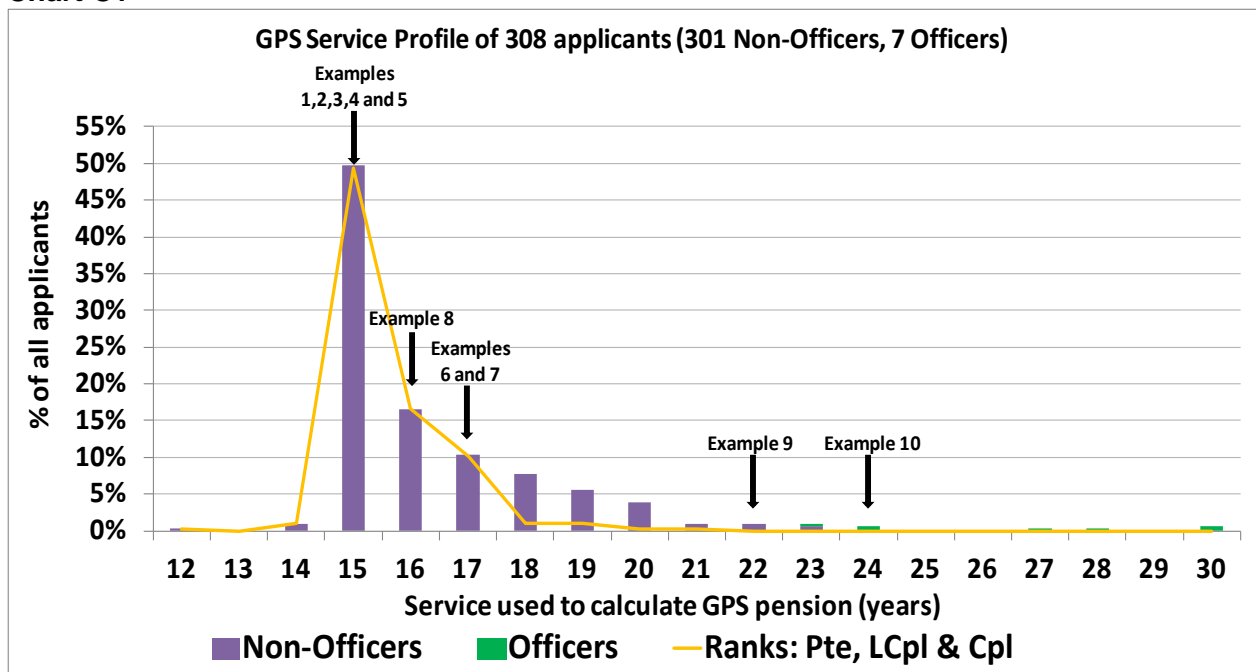


- 6.13 Examples 1 and 2 are Non-Officers retiring with 15 years' service in 1981 and 1985 respectively. For these examples the comparative benefits in AFPS75 were deferred benefits payable from age 60 and a resettlement grant payable immediately at exit. For these examples the pink bars (AFPS75) are slightly higher than the green bars (GPS) which indicates that under the given assumptions the AFPS75 pension benefits are expected to provide slightly more value than the expected GPS pension benefits receivable throughout the member's lifetime.

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

- 6.14 Examples 3 to 8 are Non-Officers retiring with 15, 16 or 17 years' service from 1990 to 2006. For these examples the comparative benefits in AFPS75 were deferred benefits payable from age 60 and a resettlement grant payable immediately at exit. For these examples the pink bars (AFPS75) are lower than the green bars (GPS) which indicates that the GPS pension benefits are assessed to be slightly more valuable than the AFPS75 pension benefits throughout the member's lifetime on the assumptions used.
- 6.15 Example 9 is a Non-Officer retiring with 22 years' service in 1997. Example 10 is an Officer retiring with 24 years' service in 2001. For these examples the comparative benefits in AFPS75 were immediate benefits payable at exit. For these examples the pink bars (AFPS75) are much higher than the green bars (GPS) which indicates that the AFPS75 pension benefits are assessed as providing more value than GPS pension benefits throughout the member's lifetime on the assumption adopted.
- 6.16 There are various different factors that affect the relative value of the pension benefits, such as the length of service, rank at exit and retirement year (as well as the data, method and assumptions adopted). The main driver behind the different capitalised value results is whether the comparative benefits in AFPS75 are deferred benefits or immediate benefits, and this is driven by the amount of service at exit. In AFPS75 an immediate pension is payable to an Officer after completing at least 16 years' service or after completing at least 22 years' service for a Non-Officer.
- 6.17 We have analysed the GPS service profile of the 308 applicants (301 Non-Officers and 7 Officers) identified by MOD, and as illustrated by Chart C1 we believe the majority of those applicants did not complete enough service to receive immediate benefits in AFPS75.

Chart C1



- 6.18 Chart C1 shows how the GPS service at exit varies across the 308 applicants and where the selected examples fall in this service profile. The purple bars show the % of the applicants that are Non-Officers (the green bars show the % of the applicants that are Officers) that have received a GPS pension with that number of years service at exit. It shows that approximately half of the 308 applicants have received a GPS pension based on 15 years' service, with 296 of the 308 applicants having received a GPS pension based on less than 22 years' service at exit. The green bars are relatively small because Officers make up a small proportion of the overall applicant group.

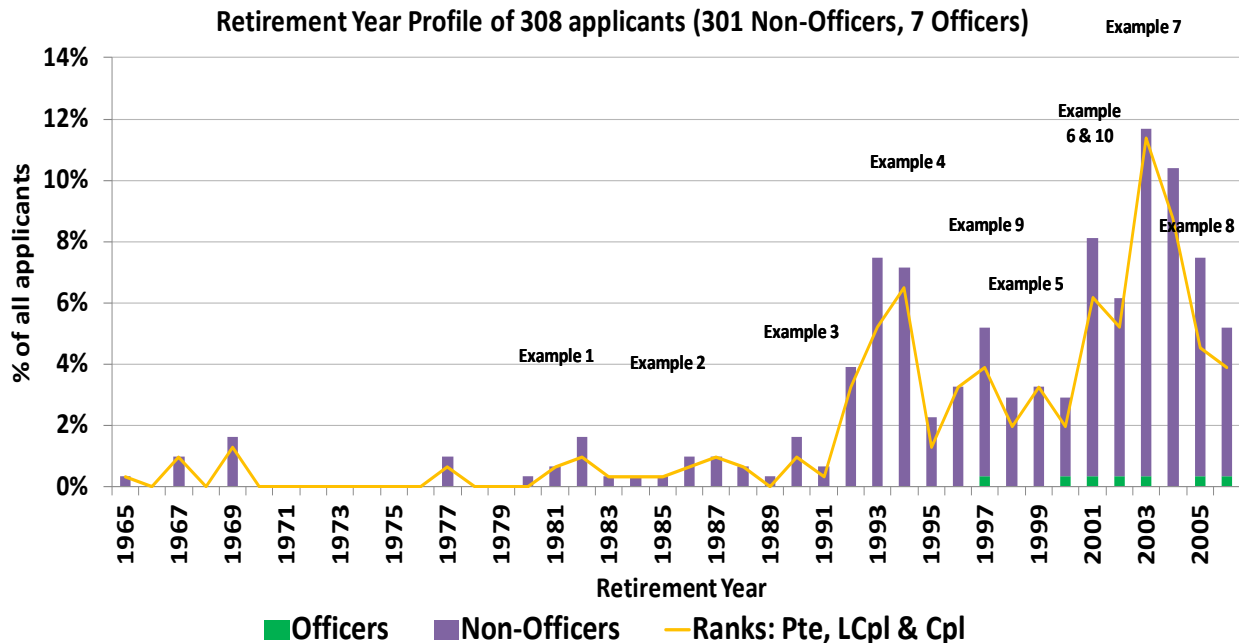
Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

- 6.19 The yellow line shows the GPS service profile for Non-Officers of the rank of Corporal or below. We can see that the majority of the applicants are a Corporal or below and that the GPS service profile is similar to the overall GPS service profile for these ranks for all applicants.
- 6.20 Our analysis shows that 296 of the 308 applicants are Non-Officers with less than 22 years' service. Of these 296 Non-Officers, 61 have been identified as having retired on redundancy or with an ill health pension from GPS (see paragraph 6.22 below). The remaining 235 applicants, which is more than half of the applicants, if they had been members of AFPS75, would, have been entitled to deferred benefits payable from age 60, except for the resettlement grant. By contrast, the GPS pays benefits immediately at exit after 15 years' service. Therefore, it is likely that if comparisons were carried out for each of these individual members, then we would determine that the assessed capital value of the benefits that they are likely to receive from the GPS would be broadly the same as, or greater than, the assessed capital value of the AFPS75 benefits.
- 6.21 There are some circumstances where the assessed capital value of the AFPS75 pension benefits is likely to be greater than the assessed capital value of the GPS pension benefits. This is most notable in cases where the Gurkha would have been entitled to immediate pension benefits in AFPS75, from the time of exit from service. This applies to 2 of the 10 example cases we have analysed. In those 2 example cases, the assessed capital value of the AFPS75 benefits was significantly more than (around 3 times) the assessed capital value of the GPS benefits. However, our analysis indicates that only 12 of the 308 applicants identified by the MOD would have been entitled to an immediate AFPS75 pension on normal benefit terms. Of these 12, 7 are Officers and 5 are senior Non-Officers (rank of Warrant Officer 2 and above).
- 6.22 In addition to the 12 Gurkhas who would have been entitled to an immediate AFPS75 pension on normal benefit terms, 61 of the 308 identified applicants have been identified as having retired on redundancy or with an ill health pension. These members had not completed enough service to be eligible for an immediate pension on normal benefit terms in AFPS75, had they been members of that scheme. However, the AFPS75 also includes provisions to provide members with immediate pensions at earlier ages in the event of redundancy or disability. If these members would have been entitled to immediate ill health benefits or immediate redundancy benefits in AFPS75, the assessed value of the AFPS75 benefits would be expected to be greater than the assessed value of the GPS pension benefits.
- 6.23 When assessing the benefits that would have been payable from AFPS75, we have assumed that the career paths followed by the example Gurkhas would have remained unchanged had they had access to that scheme. This is because the MOD have instructed us that even if a Gurkha had access to AFPS75, most would not have been allowed to extend their service to the 22 years required to reach the AFPS75 Non-Officer immediate pension point. If this was not the case then this could lead to different results for the example cases and for the conclusions we have drawn from our analysis of the applicant profile.
- 6.24 Although the key driver behind the difference in the total capitalised values are whether the AFPS75 comparator value is a deferred pension or immediate pension, another factor affecting the difference in the capitalised values is the retirement year. This is illustrated by the results for examples 1 to 8 which are all compared to deferred benefits in AFPS75 but have retired in different years. These examples do have different lengths of service and different ranks but these differences have a smaller impact on the results.
- 6.25 The retirement year makes a difference because on 1 April 2000 the GPS pension benefits were broadly doubled, so those retiring earlier will receive a greater number of smaller GPS pension benefits compared to those retiring later. Therefore, the value of the GPS benefits for those retiring earlier may be expected to be smaller. This is illustrated by example 1 and example 3 who are both Privates retiring with 15 years' service but example 1 retires in 1981 whereas example 3 retires in 1990. Example 1 shows that the member is assessed as receiving slightly more value from AFPS75 over their lifetime relative to GPS, whereas example 3 shows that the members is assessed as receiving slightly more value from GPS than AFPS75.

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

6.26 Chart C2 shows how the retirement profile varies across the 308 applicants and where the selected examples fall in this retirement profile across the different retirement years from 1965 to 2006. The purple bars show the % of applicants that are Non-Officers retiring in each year. The green bars show the % of applicants that are Officers retiring in each year. The green bars are small because Officers make up a small proportion of the applicant profile.

Chart C2



6.27 The yellow line shows the retirement pattern for Non-Officers of a Corporal or below. We can see that the majority of the applicants are a Corporal or below and that the retirement pattern is similar to the overall GPS retirement pattern for all applicants.

6.28 Chart C1 indicates that more than half of the applicants, if they had been members of AFPS75, would have been entitled to deferred benefits payable from age 60 in AFPS75 and Chart C2 shows that 276 of the 308 identified applicants retired after 1989. Examples 3 to 8, with retirement dates in year's 1990 to 2006 with AFPS75 deferred benefits as the comparator, show that the value of the GPS is expected to be greater than the value of the AFPS75 under the assumptions adopted for Gurkhas retiring in such circumstances. This does not apply, however, to the 61 applicants who have been identified as having retired on redundancy or with an ill health pension as they may have been eligible for immediate benefits under the AFPS75 (see paragraph 6.22).

7 Sensitivity Analysis

7.1 The results of the total capitalised values for each example case are dependent on the data, method and assumptions adopted. This section shows the sensitivity of the main assumptions used in this comparison exercise.

Real discount rate

- 7.2 The real discount rate i.e. the discount rate above price inflation (CPI from and including 2011 and RPI before 2011) affects by how much past payments are accumulated and by how much future payments are discounted back to the current date. An increase in the real discount rate would increase the relative value of past payments and reduce the relative value of future payments. Conversely, a decrease in the real discount rate would reduce the relative value of past payments and increase the relative value of future payments. The effect on the capitalised value of the GPS benefits and AFPS75 benefits will depend on the number of payments and the size of those payments received in the past relative to the future.
- 7.3 Table 7.1 shows the ratio of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits on the central assumptions adopted for the example cases and two variants to the central assumptions adopted, as described below. The intention of showing the variations of plus and minus 1% per annum to the central assumption adopted is to give an indication of how much the results of the analysis change in response to an illustrative change to the real discount rate assumption. This is not intended to set out the range of possible justifiable assumptions that could be used for the assessment. A ratio of more than 100% means that the total capitalised value of the GPS benefits are greater than the total capitalised value of the AFPS75 benefits. Conversely, a ratio of less than 100% means that the total capitalised value of the GPS benefits are lower than the total capitalised value of the AFPS75 benefits.
- 7.4 A real discount rate (in excess of UK CPI) of 3.0% per annum and a real discount rate (in excess of UK RPI) of 2.25% per annum were adopted as the central assumption for the example cases. These assumptions are described in section 5 of this report.
- 7.5 In variant (i) the real discount rate on the central assumptions is increased by 1% per annum. This gives a real discount rate (in excess of UK CPI) of 4.0% per annum and a real discount rate (in excess of UK RPI) of 3.25% per annum.
- 7.6 In variant (ii) the real discount rate on the central assumptions is decreased by 1% per annum. This gives a real discount rate (in excess of UK CPI) of 2.0% per annum and a real discount rate (in excess of UK RPI) of 1.25% per annum.
- 7.7 The ratios, shown in Table 7.1, of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits illustrate that the assumption adopted for the real discount rate does not materially affect the results of the example cases. For example, in example 1 the ratio of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits under the central assumption is 93%. Increasing this assumption by 1% per annum (variant (i)) changes the ratio by a couple of percent to 95% and decreasing this assumption by 1% per annum (variant (ii)) changes the ratio by one percent to 92%.

Table 7.1

Sensitivity of the real discount rate i.e. the discount rate above price inflation (RPI/CPI)			
Example Case	Ratio of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits		
	Variant (i) +1% per annum	Central Assumption	Variant (ii) -1% per annum
1	95%	93%	92%
2	94%	91%	88%
3	122%	119%	116%
4	112%	107%	102%
5	153%	146%	140%
6	125%	117%	110%
7	146%	138%	130%
8	155%	147%	139%
9	29%	31%	32%
10	37%	39%	41%

Real earnings growth rate

- 7.8 The real earnings growth rate i.e. the nominal earnings growth rate above price inflation (CPI) affects by how much the GPS pension payments are increased in the future. An increase in the real earnings growth rate would increase future GPS pension payments and consequently increase the value of the GPS relative to the AFPS75. Conversely, a decrease in the real earnings growth rate would decrease future GPS pension payments and consequently decrease the value of the GPS relative to the AFPS75. The AFPS75 pension benefits are not affected by this assumption and therefore, if this assumption was changed, the value of the AFPS75 benefits would not change.
- 7.9 Table 7.2 shows the ratio of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits on the central assumptions adopted for the example cases and two variants to the central assumptions adopted, as described below. The intention of showing the variations of plus and minus 1% per annum to the central assumption adopted is to give an indication of how much the results of the analysis change in response to an illustrative change to the real earnings growth rate assumption. This is not intended to set out the range of possible justifiable assumptions that could be used for the assessment. A ratio of more than 100% means that the total capitalised value of the GPS benefits are greater than the total capitalised value of the AFPS75 benefits. Conversely, a ratio of less than 100% means that the total capitalised value of the GPS benefits are lower than the total capitalised value of the AFPS75 benefits.
- 7.10 A real earnings growth rate (in excess of CPI) of 2.25% per annum was adopted as the central assumption for the example cases. This assumption is described in section 5 of this report.
- 7.11 In variant (i) the real earnings growth rate on the central assumptions is increased by 1% per annum. This gives a real earnings growth rate (in excess of CPI) of 3.25% per annum.
- 7.12 In variant (ii) the real earnings growth rate on the central assumptions is decreased by 1% per annum. This gives a real earnings growth rate (in excess of CPI) of 1.25% per annum.
- 7.13 The ratios, shown in Table 7.2, of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits illustrate that this assumption has a greater affect on the results of the example cases than the assumption adopted for the real discount rate. For example, in example 1 the ratio of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits under the central assumption is 93%. Increasing this assumption by 1% per annum (variant (i)) changes the ratio by five percent to 98% and decreasing this assumption by 1% per annum (variant (ii)) changes the ratio by four percent to 89%.
- 7.14 Although there is some variation in the ratios between the different variant assumptions the overall comparison is broadly the same. We note that for more extreme scenarios than the -1% variant, for which the results of the assessment would be outside the range indicated on the table below, the adopted assumption would imply that the rates of pay used to calculate GPS increases would not have grown significantly in real terms over a protracted period. Whilst it is not possible to accurately project future rates of pay for these applicants, this would not be consistent with recent experience.

Table 7.2

Sensitivity of real earnings growth rate i.e. the nominal earnings growth rate above price inflation (CPI)			
Example Case	Ratio of the total capitalised value of the GPS benefits to the total capitalised value of the AFPS75 benefits		
	Variant (i) +1% per annum	Central Assumption	Variant (ii) -1% per annum
1	98%	93%	89%
2	98%	91%	85%
3	132%	119%	109%
4	120%	107%	96%
5	167%	146%	130%
6	135%	117%	102%
7	161%	138%	120%
8	173%	147%	126%
9	33%	31%	28%
10	44%	39%	35%

Stephen Humphrey (Fellow of the Institute of Actuaries)
Chief Actuary
GAD

26 July 2013

Appendix A: Results from Examples

This Appendix contains chart A1 which shows the total capitalised value of the benefits in GPS and AFPS75 for each example together with table A1 which show the figures underlying the chart.

Chart A1

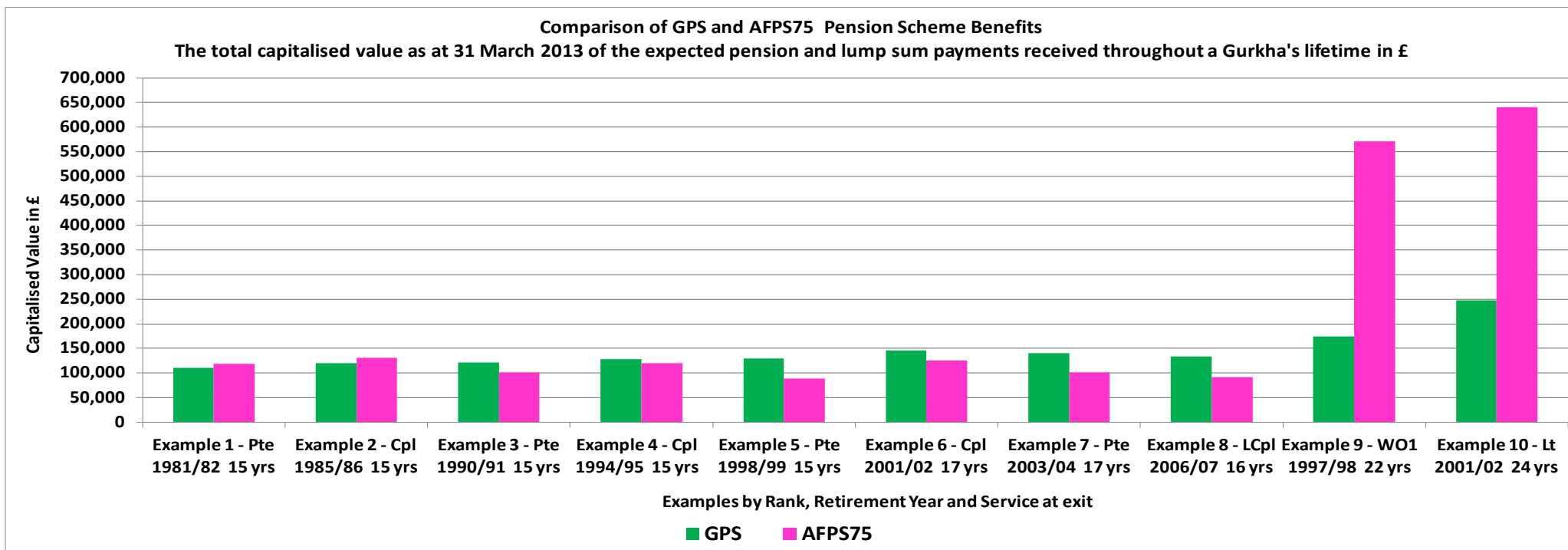


Table A1

Total Capitalised Value as at 31 March 2013 in £ (rounded to nearest £100)	Example 1 - Pte 1981/82 15 yrs	Example 2 - Cpl 1985/86 15 yrs	Example 3 - Pte 1990/91 15 yrs	Example 4 - Cpl 1994/95 15 yrs	Example 5 - Pte 1998/99 15 yrs	Example 6 - Cpl 2001/02 17 yrs	Example 7 - Pte 2003/04 17 yrs	Example 8 - LCpl 2006/07 16 yrs	Example 9 - WO1 1997/98 22 yrs	Example 10 - Lt 2001/02 24 yrs
GPS	111,000	119,200	120,700	127,800	129,200	145,700	139,700	133,100	174,300	247,700
AFPS75	118,800	130,900	101,100	119,800	88,300	124,800	101,400	90,800	570,400	640,000

Appendix B: Data used in Examples

This Appendix sets out the data used in the comparison calculations.

- Table B1 - Membership data – MOD provided the rank, service and retirement date. The retirement year, age in retirement year and age at 2013 were calculated using the data provided.
- Table B2 - GPS Pension data – MOD provided the monthly GPS pension in Indian Currency Rupees (ICR) as at 1 April each year in prices at the time of retirement.
- Table B3 - GPS Lump Sum data – MOD provided the GPS retirement gratuity and GPS resettlement grant in Pound Sterling (£) in prices at the time of retirement.
- Table B4 - AFPS75 pension and lump sum data – MOD provided the AFPS75 pension and lump sums (terminal grant and resettlement grant) in pound sterling (£) in prices at the time of retirement.
- Table B5 – UK Price Inflation - MOD provided the actual UK price inflation rates which are the annual increases applied to pensions in payment in the UK under the Pensions Increase Act. These are broadly in line with the Office for National Statistics Retail Price Index for increases before 2011 and then in line with the Consumer Price Index for increases after that. For example, the 1998 inflation figure is the RPI increase over the year to September 1997 which was used to increase UK pensions in April 1998.
- Table B5 - ICR: £ exchange rates – MOD provided ICR to £ exchange rates. The ICR:£ exchange rates from 1981 to 1990 are an annual average ICR:£ exchange rate. From 1991 the ICR: £ exchange rate is the exchange rate at 1 April of each year.

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Table B1 – Membership Data

	Example 1	Example 2	Example 3	Example 4	Example 5	Example 6	Example 7	Example 8	Example 9	Example 10
Rank at Retirement	Private	Corporal	Private	Corporal	Private	Corporal	Private	Lance Corporal	WO1	LT
Service at Retirement (years)	15	15	15	15	15	17	17	16	22	24
Retirement Date	14 June 1981	31 October 1985	28 June 1990	14 January 1995	17 February 1999	24 January 2002	30 January 2004	17 November 2006	1 April 1997	14 June 2001
Retirement Year (1 April to 31 March)	1981/82	1985/86	1990/91	1994/95	1998/99	2001/02	2003/04	2006/07	1997/98	2001/02
Age in Retirement Year (years)	34	34	33	34	34	35	36	37	43	42
Age in 2013 (in years)	66	62	56	53	49	47	46	44	59	54

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Table B2 – GPS Pension at 1 April in ICR

GPS Pension Monthly ICR	Example 1	Example 2	Example 3	Example 4	Example 5	Example 6	Example 7	Example 8	Example 9	Example 10
1 April 1981	265									
1 April 1982	296									
1 April 1983	331									
1 April 1984	371									
1 April 1985	381	410								
1 April 1986	415	448								
1 April 1987	492	531								
1 April 1988	544	588								
1 April 1989	592	640								
1 April 1990	647	699	647							
1 April 1991	706	762	706							
1 April 1992	824	890	824							
1 April 1993	954	1,030	954							
1 April 1994	1,028	1,110	1,028	1,110						
1 April 1995	1,113	1,202	1,113	1,202						
1 April 1996	1,663	1,663	1,663	1,663						
1 April 1997	1,820	1,820	1,820	1,820					2,941	
1 April 1998	1,966	1,966	1,966	1,966	1,966				3,177	
1 April 1999	2,123	2,123	2,123	2,123	2,123				3,431	
1 April 2000	4,926	5,018	4,926	5,018	4,926				8,635	
1 April 2001	5,463	5,565	5,463	5,565	5,463	6,119			9,576	13,277
1 April 2002	6,031	6,144	6,031	6,144	6,031	6,755			10,572	14,658
1 April 2003	6,755	6,881	6,755	6,881	6,755	7,566	7,075		11,841	16,416
1 April 2004	7,430	7,569	7,430	7,569	7,430	8,323	7,782		13,025	18,058
1 April 2005	7,653	7,796	7,653	7,796	7,653	8,572	8,016		13,416	18,600
1 April 2006	9,913	10,179	9,913	10,179	9,913	11,027	10,706	10,309	15,683	20,237
1 April 2007	10,637	10,922	10,637	10,922	10,637	11,832	11,487	11,062	16,828	21,714
1 April 2008	11,243	11,544	11,243	11,544	11,243	12,506	12,142	11,692	17,788	22,952
1 April 2009	12,828	13,172	12,828	13,172	12,828	14,270	13,854	13,341	20,296	26,188
1 April 2010	14,278	14,661	14,278	14,661	14,278	15,882	15,420	14,849	22,589	29,147
1 April 2011	15,648	16,068	15,648	16,068	15,648	17,407	16,900	16,274	24,758	31,945
1 April 2012	16,822	17,273	16,822	17,273	16,822	18,713	18,168	17,495	26,614	34,341
1 April 2013	18,571	19,070	18,571	19,070	18,571	20,659	20,057	19,314	29,382	37,912

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Table B3 – GPS Lump Sum Payments in £

	Example 1	Example 2	Example 3	Example 4	Example 5	Example 6	Example 7	Example 8	Example 9	Example 10
GPS Retirement Gratuity £	169	192	578	629	685	1,274	1,297	1,481	1,196	2,227
GPS Resettlement Grant £	910	1,627	1,216	1,970	2,132	2,862	3,244	3,558	3,202	4,295

Table B4 – AFPS75 Pension and Lump Sum Payments in £

	Example 1	Example 2	Example 3	Example 4	Example 5	Example 6	Example 7	Example 8	Example 9	Example 10
AFPS75 Pension per annum £	1,166	1,913	2,070	3,385	3,035	5,154	4,324	4,440	8,616	11,743
AFPS75 Terminal Grant £	3,498	5,740	6,211	10,154	9,104	15,463	12,972	13,321	25,848	35,229
AFPS75 Resettlement Grant £	2,436	3,169	4,436	5,583	6,417	7,577	8,226	8,947	0	0

Table B5 – UK price inflation and ICR: £ exchange rate

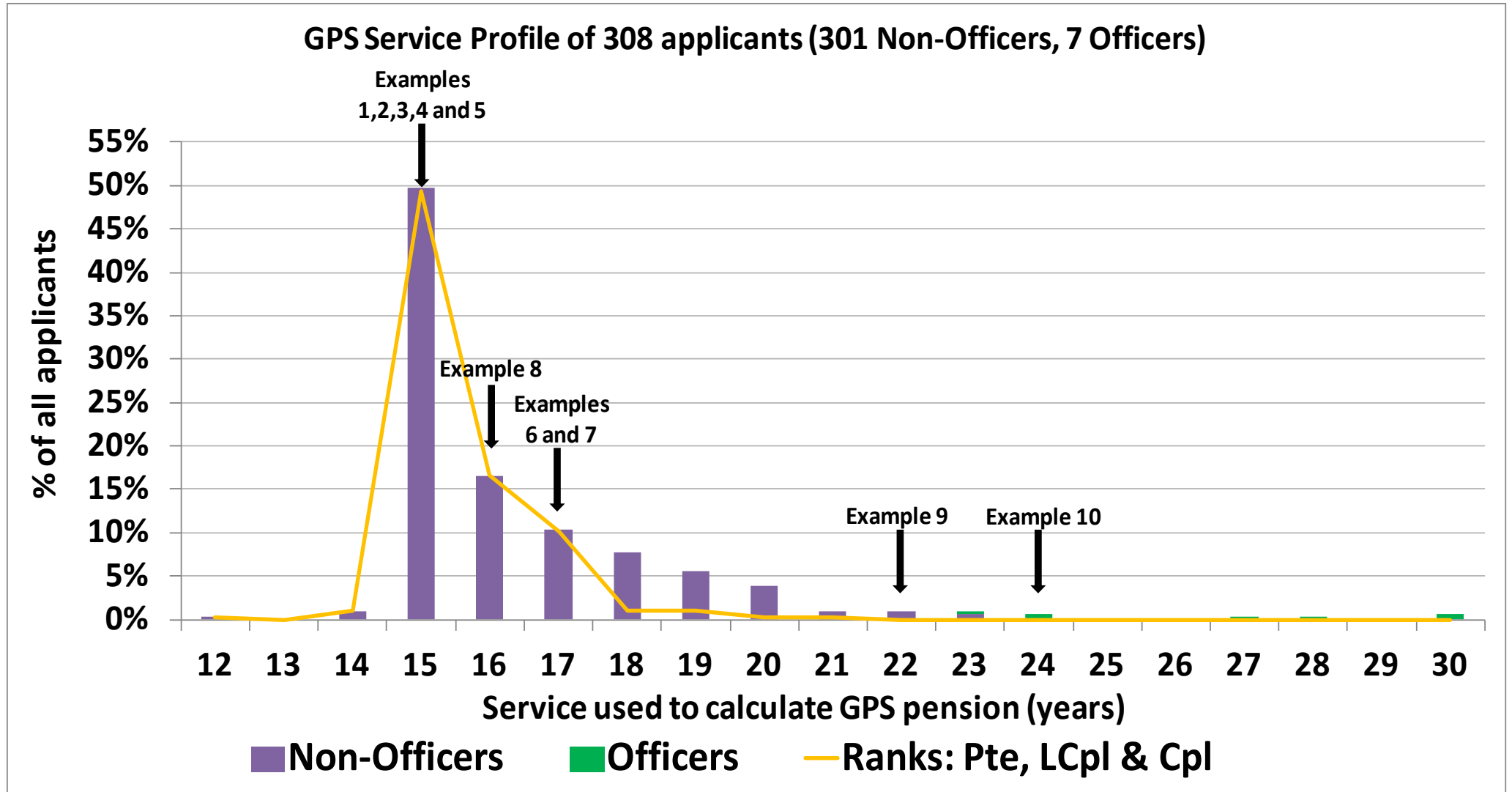
Year	UK Price Inflation per annum	ICR:£ Exchange Rate
1981	1.091	17.399
1982	1.110	16.517
1983	1.037	15.308
1984	1.051	15.114
1985	1.070	15.873
1986	1.011	18.485
1987	1.021	21.181
1988	1.042	24.756
1989	1.059	26.548
1990	1.076	31.080
1991	1.109	34.500
1992	1.041	50.000
1993	1.036	46.660
1994	1.018	46.930
1995	1.022	50.350
1996	1.039	53.030
1997	1.021	57.350
1998	1.036	66.070
1999	1.032	69.070
2000	1.011	69.390
2001	1.033	66.890
2002	1.017	69.550
2003	1.017	74.840
2004	1.028	80.460
2005	1.031	82.980
2006	1.027	78.010
2007	1.036	85.250
2008	1.039	80.230
2009	1.050	74.020
2010	1.000	68.700
2011	1.031	72.860
2012	1.052	80.290
2013	1.022	81.780

Appendix C: Applicant Data and Charts

This Appendix includes the GPS service profile chart and retirement year profile chart of the 308 applicants. The applicant data used in each chart is set out below.

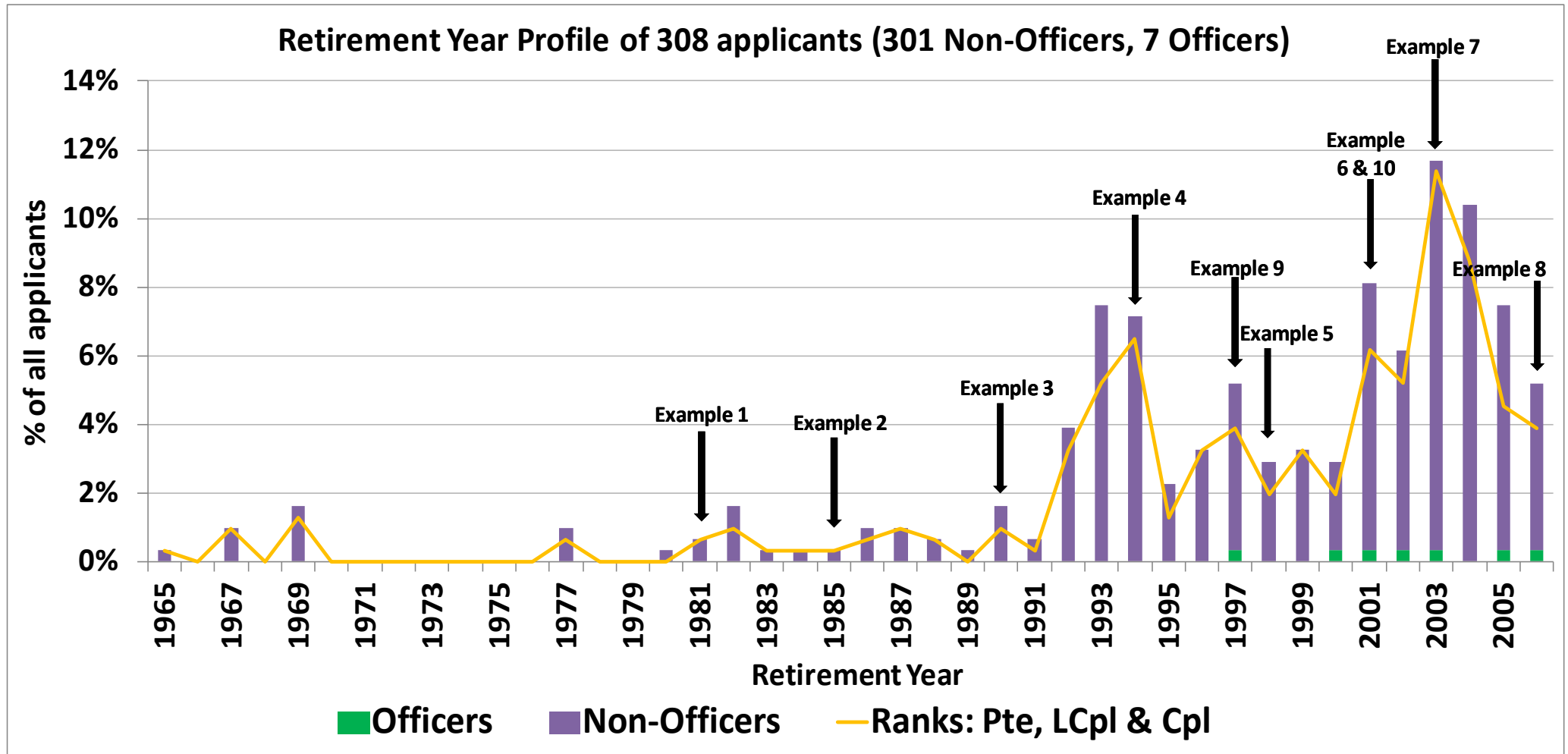
- Chart C1 – This shows how the GPS service at exit varies across the 308 applicants and where the selected examples fall in this service profile. The purple bars show the % of the applicants that are Non-Officers. The green bars show the % of the applicants that are Officers. The yellow line shows the % of applicants that are at the rank of Corporal or below.
- Chart C2 – This shows how the retirement profile varies across the 308 applicants and where the selected examples fall in this retirement profile across the different retirement years from 1965 to 2006. The purple bars show the % of applicant's that are Non-Officers retiring in each year. The green bars show the % of applicants that are Officers retiring in each year. The yellow line shows the % of applicants that are at the rank of Corporal or below.
- Table C1 – This table shows the underlying data used to produce chart C1 illustrating the GPS service profile of the 308 applicants.
- Table C2 - This table shows the underlying data used to produce chart C2 illustrating the retirement year profile of the 308 applicants. We have not included the years in between those given because there were zero Gurkhas retiring in that year. For example, none of the 308 applicants retired in 1975 and so this year is not shown in the table below.

Chart C1



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Chart C2



Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

Table C1

	Number of applicants leaving with a GPS pension based on x years service at exit																			
	Year's service at exit																			
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Non-Officers	1	0	3	153	51	32	24	17	12	3	3	2	0	0	0	0	0	0	0	301
Officers	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	1	0	2	7
All Ranks	1	0	3	153	51	32	24	17	12	3	3	3	2	0	0	1	1	0	2	308
Ranks: Pte, LCpl & Cpl	1	0	3	152	51	31	3	3	1	1	0	0	0	0	0	0	0	0	0	246

Table C2

	Number of applicants retiring in each year (1 April to 31 March)														
	Retirement year														
	1965	1967	1969	1977	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
Non-Officers	1	3	5	3	1	2	5	1	1	1	3	3	2	1	
Officers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
All Ranks	1	3	5	3	1	2	5	1	1	1	3	3	2	1	
Ranks Pte, LCpl & Cpl	1	3	4	2	0	2	3	1	1	1	2	3	2	0	

Table C2 Continued

	Number of applicants retiring in each year (1 April to 31 March)																	
	Retirement year																	
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total from 1965 to 2006
Non-Officers	5	2	12	23	22	7	10	15	9	10	8	24	18	35	32	22	15	301
Officers	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0	1	1	7
All Ranks	5	2	12	23	22	7	10	16	9	10	9	25	19	36	32	23	16	308
Ranks Pte, LCpl & Cpl	3	1	10	16	20	4	10	12	6	10	6	19	16	35	27	14	12	246

Appendix D: Summary of GPS and AFPS75 Scheme Benefits

This Appendix provides a high level summary of the benefits payable on retirement from GPS and AFPS75 that are relevant to the analysis in the report. This schedule is not intended to be comprehensive and reflects our understanding of the benefits payable by the AFPS75 scheme and the GPS scheme at the time this report has been produced. Nothing in this schedule can override the rules of the respective schemes and if there are any differences between this schedule and the rules of the respective scheme the rules will prevail.

	AFPS75 Scheme Benefit	GPS Scheme Benefit
Benefits on normal retirement	<p>Immediate Benefit Entitlement</p> <p>An immediate pension, on exit from service, is payable to an Officer after completing at least 16 years' service from age 21 or is payable to a Non-Officer after completing at least 22 years' service from age 18.</p> <p>The annual pension is set out in the AFPS75 pension code applicable at retirement. The pension is based on rank and service at exit.</p> <p>The pension is payable for life.</p> <p>A terminal grant of 3 times the immediate annual pension is payable on exit from service.</p>	<p>Immediate Benefit Entitlement</p> <p>An immediate pension, on exit from service, is payable to either an Officer or a Non-Officer after completing at least 15 years' service.</p> <p>The annual pension is set out in the annual GPS pension code. The pension is based on rank and service at exit.</p> <p>The pension is payable for life.</p> <p>A death cum retirement gratuity.</p> <p>A resettlement grant.</p>

Comparison of value of the benefits of the Gurkha Pension Scheme and the Armed Forces Pension Scheme 1975

	<p>Deferred Benefit Entitlement</p> <p>A deferred pension is payable (if a member has completed at least 2 years' service but has insufficient service to qualify for an immediate pension). The deferred pension is payable from age 60 for service accrued before 6 April 2006. For service accrued on or after 6 April 2006 the deferred pension benefits are payable from age 65.</p> <p>Deferred pensions are calculated as 3% of full career pension for each year of service for Officers and 2.75% of full career pension for each year of service for Non-Officers. The full career pension is attained after 34 years' service for an Officer and after 37 years' service for a Non-Officer.</p> <p>A terminal grant of 3 times the annual deferred pension is payable at the point the deferred pension comes into payment (i.e. 60 and 65 (if applicable))</p> <p>See note 1.</p>	<p>Deferred Benefit Entitlement</p> <p>There is no deferred pension payable under the rules of the GPS. However, if a member is not eligible for immediate benefits then there are three lump sums which may be payable, as follows:</p> <p>A death cum retirement gratuity (with minimum 5 years' service).</p> <p>A service gratuity (with minimum 5 years' service).</p> <p>A resettlement grant (with a minimum of 4 years' service).</p>
<p>Pension increases in payment</p>	<p>AFPS75 pensions in payment are increased in line with the Pensions Increase Act which is currently based on changes in the Consumer Price Index. No increases are applied before age 55 except for those who retire on ill health.</p>	<p>The GPS pension increases in payment each year in line with an index which reflects Nepalese inflation and is reviewed periodically against pay levels. We understand that in the long term this indexation approach broadly reflects increases in Nepalese and Indian Earnings.</p>
<p>Pension increases in deferment</p>	<p>AFPS75 deferred pensions are increased in line with the Pensions Increase Act which is currently based on changes in the Consumer Price Index between exit and retirement.</p>	<p>Not applicable because only an immediate pension is payable from GPS.</p>

Notes:

1. In addition to the AFPS75 deferred benefits a resettlement grant is also payable. The resettlement grant is payable immediately on exit from service. It is payable only to an Officer after completing at least 9 years' service or to a Non-Officer after completing at least 12 years' service. The amount payable differs between Officers and Non-Officers.
2. In addition to the above benefits, a contingent spouse's benefit would typically be payable on death from AFPS75 and GPS. Contingent benefits have not been allowed for in the example cases (see paragraph 4.12).
3. The benefits described above, and throughout this report, reflect those that we understand are currently payable from GPS to Queen's Gurkha Officers and Gurkha Non-Officers. We note that some members, for example Gurkha Commissioned Officers and Short Service Commission (Gurkha) Officers, may historically have had slightly different benefit entitlements. We do not believe that these differences affect the analysis in this report.