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Guaranteed Minimum Pensions - Conversion To Main Benefits

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ABSTRACT

In the defined benefits schemes in the United Kingdom (UK), the pension provided to the pensioners is divided in two components: Guaranteed Minimum Pension (GMP) and Excess. However, GMP is only a part of the accumulated benefit pension between 6th April 1978 and 5th April 1997 and it is treated way different from Excess.

The way Guaranteed Minimum Pension is treated causes many inequalities between men and women, in particularly due to the differences on the GMP Payment Age and on the accrual rate. These inequalities felt by the members of the scheme led to a judgment in court, Lloyds case. This case allowed and established the use of some methods to equalize pensions.

However, it is being considered other method due to the uncertainty about the GMP equalization, which was recently clarified.

GMP "follows a journey" of four steps and the last step of the GMP Journey is the conversion of the GMP benefits in standard benefits. In consequence, the main goal of this work is to develop a generic calculation model of the conversion of that standard benefits, providing an easier treat and consideration in the calculations. Thus, the pension schemes will have minor data administration and actuarial calculations expenses. Also, it will become easier to communicate the information to the members of the scheme and to the State.

Keywords: Pension Schemes, United Kingdom, Guaranteed Minimum Pension, GMP Journey, GMP equalization, GMP conversion

RESUMO

Nos fundos de pensões de benefício definido do Reino Unido, a pensão atribuída ao pensionista está dividida em duas componentes: Pensão Mínima Garantida (PMG) e Excesso. Contudo, a PMG é uma parte da pensão que foi acumulada entre 6 de abril de 1978 e 5 de abril de 1997 e é tratada de uma forma bastante diferente do Excesso.

A forma como a Pensão Mínima Garantida é tratada causa muitas desigualdades entre homens e mulheres, em particular devido às diferenças na idade de pagamento da PMG e na taxa de crescimento. Estas desigualdades verificadas pelos membros do fundo de pensões deu origem a um julgamento em tribunal, caso de Lloyds. Este caso estabeleceu e permitiu o uso de alguns métodos de equalização de forma a igualar as pensões.

No entanto, está a ser considerado um método alternativo, devido à incerteza acerca da equalização da PMG, a qual foi recentemente esclarecida.

A PMG segue um “percurso” de quatro fases e a última fase é a conversão dos benefícios da PMG em benefícios standard. Assim, o principal objetivo deste trabalho é desenvolver um modelo de cálculo genérico que permita a conversão para esses benefícios standard, permitindo que os cálculos sejam tratados e considerados de uma forma mais simples. Deste modo, os fundos de pensões terão uma administração de dados menor, assim como despesas mais reduzidas nos cálculos atuariais. Para além do que foi mencionado anteriormente, tornará mais fácil a comunicação da informação para com os membros do esquema e para com o Estado.

Palavras-chave: Fundos de Pensões, Reino Unido, Pensão Mínima Garantida, Percurso do PMG, PMG equalização, PMG conversão

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ACRONYMS

BSP	Basic State Pension
CARE	Career Average Revalued Earnings
CPI	Costumer Price Index
DB	Defined Benefit
DC	Defined Contribution
DOB	Date of Birth
DOC	Date of Calculation
DOL	Date of Leaving
DOR	Date of Retirement
DPSC	Date Pensionable Service Commenced
DWP	Department of Work and Pensions
GMP	Guaranteed Minimum Pension
GPA	Guaranteed Pension Age
GPD	Guaranteed Pension Date
HMRC	Her Majesty's Revenue and Customs
NIC	National Insurance Contributions
NPA	Normal Pension Age
NPD	Normal Pension Date
NRA	Normal Retirement Age
NRD	Normal Retirement Date
RPI	Retail Price Index

ACRONYMS

S2P State Second Pension

SERPS State Earnings Related Pension Schemes

SPA State Pension Age

SPD State Pension Date

UK United Kingdom

WTW Willis Towers Watson

INTRODUCTION

The present report was developed at Willis Towers Watson's Lisbon Service Center, over a period of six months. It deals with a very common topic in the pension schemes of the United Kingdom (UK), focusing on the pensions that the pensioners from the UK receive upon their retirement.

Most of the population in the UK resorts to pension schemes in order to receive a higher value of pension at the time of their retirement. The UK pension scheme is a sort of combination of the State and private schemes, that in turn is divided in three main sections: The State Pension System; The Private Pension System and Public Service Pension Schemes.

The pension is split in two components and both have different ways to be considered. These two parts of the pension are called: Excess and Guaranteed Minimum Pension.

This report will only consider the Guaranteed Minimum Pension (GMP) part, consisting on the Pre 88 GMP (GMP accrued between 6 April 1978 and 5 April 1988 being the State total responsible to pay any increase) and Post 88 GMP (GMP accrued between 6 April 1988 and 5 April 1997, the scheme is the principal responsible to provide inflation increases up to a certain cap and the State is responsible to provide the remainder).

The topic chosen was GMP Conversion, which is the last step of what is called "GMP Journey". It is the conversion of the GMP benefits into standard benefits, which are easier to treat and to consider on the calculations. After GMP equalization (process before GMP conversion on "GMP Journey", which consists in bringing equality between the male and female members' pension, through one of three methods) GMP conversion started to be taken in consideration.

GMP Conversion will allow pension schemes to have less costs at data administration and actuarial calculations. It will also become easier to communicate the information to the members of the scheme and to the State.

To better understand the path that leads to GMP conversion, it is necessary to comprise how the United Kingdom pension schemes work and all the steps and processes that GMP needs to pass through. For this reason, this report is structured as it follows: at Chapter 2 there is an explanation of how the UK State Pension System works; at Chapter 3 and Chapter 4 it will be explained what GMP is, how it is calculated and considered, what issues it brings, its journey and some possible solutions to make it simpler as possible.

In order to follow all these concepts and processes, examples along the report will be given. Most of these working examples will represent deferred members, which are members that joined the scheme and left before the Normal Retirement Age, and the goal is to understand, inside their working lifetime, what value of GMP they are entitled to. All the schemes, members, values and scenarios presented are merely representative.

UK STATE PENSION SYSTEM

The United Kingdom (UK) Pension System is the most unlikely one, usually the pensions are paid through the social security, but in the UK the income of pensioners come, mostly, from non-social security resources. An individual becomes a pensioner when achieves the Normal Retirement Age (NRA) and become a retiree. So, what the pension scheme does is to pay a pension that will replace the income that the individual was receiving during the active working time and it will stop at the time that the individual passes away. In this last situation, the next step is to provide to the spouse or the dependants a certain percentage of the member's pension. The UK State Pension Scheme is like a combination of the State and private schemes, in order to understand it will be presented in three main sections:

- The State Pension System
- The Private Pension System
- Public Service Pension Schemes

2.1 The State Pension System

The State Pension System is comprised in two State pensions: The Basic State Pension (BSP) and The State Second Pension (S2P), both financed by the National Insurance Contributions (NICs). The National Insurance Contributions are funded by a percentage of member's earnings, established by the government. These contributions are mandatory for employers and employees until they reach the State Pension Age (SPA). Upon reaching the State Pension Age, which depends on the date of birth, the members are allowed to claim their due pension. The SPA is increasing gradually along the years, it is expected to reach 66 at 2020 and 67 between 2026 and 2028 [1].

In April 2016 it was introduced a new State pension in order to simplify the old system, with an additional pension. All the calculations and the retirement pension started to be based on the own member's contributions instead on the NICs, which provide pension amounts much closer to the income that they received as active members.

2.2 The Private Pension System

The Private Pension System is composed by: occupational schemes and personal pensions. The occupational schemes are schemes established by the employers to provide employees some benefits at retirement age. These schemes can be:

Defined benefit (DB): The members are provided with a guaranteed benefit on retirement. Usually that benefit is calculated using formulas based on service and salary at or near retirement like: Final Salary (FS); Career Average Revalued Earnings (CARE) and Final Average (FA). Until then, the total cost is unknown at outset and exists the possibility that the employer bears risk of additional funds. In this type of benefit the pooled fund is separated from the company's assets.

Defined Contributions (DC): This type of schemes are also known as money purchase schemes. The benefits received are dependent on investments returns to retirement and annuity rates at retirement. The members bear risk of additional funds being required or/and ultimate pension being insufficient.

Many occupational schemes are contracted out of State Earnings Related Pension Schemes (SERPS) [¹] but the government only allows contracting out if the pension meets certain conditions as the scheme has to ensure that member's benefit will not be less than the pension that the members would have if they weren't contracted out.

The personal pensions, created in 1988, is mainly DC schemes that provides to those who do not have retirement savings granted or a job during a long time. This kind of system has a minimum retirement age of 55 and it is expected to increase to 58 by 2028 and thereafter establish 10 years below the State Pension Age.

2.3 Public Service Pension Schemes

These type of pension schemes are known as PSPSs and they are targeted for public sector employees. The payment of the benefits can be in addition to and separately from the State Pension. The benefits are based on member's working lifetime and earnings, they can vary from one scheme to another because of the different accrual rates, revaluation rates, Normal Pension Ages, employee and employer contribution rates, lump sum commutation rates and indexation rates.

¹Also known as S2P

GUARANTEED MINIMUM PENSION

Guaranteed Minimum Pension is the minimum guaranteed level of pension, which a scheme has to provide to the pensioners from 6th April 1978 to 5th April 1997 if they are contracted out of State Earnings Related Pension Scheme (SERPS), meaning that between those dates the members won't receive any amount of the State pension. The GMP can only be applied to members who were immediately contracted out by their pension scheme. This minimum guaranteed level of pension is paid to members at different ages, being 60 for females and 65 for males.

3.1 Background to GMPs

The GMP follows rules defined by the UK State and the Excess follows specific rules given by the scheme. Despite that, these two components aren't completely separated, and it is needed a certain careful and complexity through the calculations. The GMP is treated way different from the non-GMP part: pension increases, spouse's/civil partner's pensions, revaluation to GMP Payment Age and late retirement. GMP receives increases to compensate price inflation, currently, the index used as reference is the Consumer Price Index (CPI).

The responsibility for paying increases on the GMP are shared by the State and the employer. Each of them pays part of the GMP, while the pension scheme is responsible for the entire amount of GMP when it enters in payment. The scheme also guarantees that the member's pension can't be less than the NIC's and the member receives their SERPS. If a person belongs to a scheme, it reduces the contributions and the member is called "contracted-out".

This part of the pension enters in payment at a specific point in time, that is at a certain age and at a certain date:

- **GMP Payment Age (GPA):** It is different for males and females, being at 60th birthday for women and at 65th birthday for men.
- **GMP Payment Date (GPD):** Date when the GMP enters in payment, which means when the members achieve their GPA.

3.2 Features and Peculiarities of GMPs

The GMP is split in two components, Pre 88 GMP and Post 88 GMP:

$$Pre88GMP + Post88GMP = TotalGMP$$

Pre 88 GMP : Accrued between 06/04/1978-05/04/1988. The state is responsible for all the payment increases.

It is calculated as follows:

$$Pre88GMP = \frac{Earnings}{Contribution\ rate \times Accrual\ rate} \quad (3.1)$$

Post 88 GMP : Accrued between 06/04/1988-05/04/1997. The scheme must provide inflation increases in line with Consumer Price Index up to a maximum of 3 % and the State provides the remainder.

It is calculated as follows:

$$Post88GMP = \frac{Earnings}{Contribution\ rate \times Accrual\ rate} \quad (3.2)$$

Where:

- The **earnings** are the members income during a specific time period;
- The **contribution rate** is the employee contribution;
- The **accrual rate** is the rate at which interest is accrued multiplied by the working lifetime of the member. It differs from Pre 88 GMP to Post 88 GMP. For any GMP acquired before 6th April 1988 the accrual rate is 25% and for any GMP earned after 6th April 1988 the accrual rate is 20%.

The working lifetime represents the complete tax years between the period that the GMP is accrued, having a minimum of 20 years and a maximum of 49 years for males and 44 years for females. It is considered that the minimum working age is 16 years old, so the maximum working life considered is the difference between that age and the GMP payment age. Each complete tax year begins at 6th April of every year and the start date of this score is 6th april 1978. The working lifetime period ends at the 5th April before the GPA of which member;

3.3 Revaluation of GMP

In order to preserve the value, the GMP has to be revalued. So GMP accrued until 1997 continued to be revalued until the member left pensionable service according to the statutory increases or a certain revaluation method. The statutory revaluation is the minimum that the schemes need to provide to their members, being possible to provide more than that. If a member who is entitled to a GMP leaves service before GPA, the government requires the GMP to be revalued up to GPA by one of the following methods:

- Fixed rate revaluation;
- Section 148 revaluation;
- Limited rate revaluation (Pre 97 leavers only).

Revaluation of Excess and GMP is to assess the statutory minimum benefit payable at GMP payment age/ Normal Payment Age (NPA).

3.3.1 Fixed Rate Revaluation

The GMP increases at a fixed rate for each complete tax year between the Date of Leaving (DOL) and GPD, which means that the rate that is applied on each exercise always depends on the Date of Leaving of the member in study. This is the most common revaluation method.

The next table summaries these increase rates on the different periods of the member's leaving ^[1]:

Table 3.1: Fixed Rate Revaluation Rates [21]

Leaving date		Revaluation rate per annum (%)
Before 06/04/1988		8.5
	06/04/1988 - 05/04/1993	7.5
	06/04/1993 - 05/04/1997	7
Between	06/04/1997 - 05/04/2002	6.25
(both end dates included)	06/04/2002 - 05/04/2007	4.5
	06/04/2007 - 05/04/2012	4.0
	06/04/2012 - 05/04/2017	4.75
	On or after 06/04/2017	3.5

Example:

- **Date of Leaving** : 08/03/1988
- **GPD** : 05/10/2005

¹These increase rates are legislated.

- **GMP at Date of Leaving** : £200 *pa* [²]

Since the Date of Leaving is before 06/04/1988 and according to the table 3.1, the rate that must be applied for that revaluation is 8.5 %.

Counting the complete tax years:

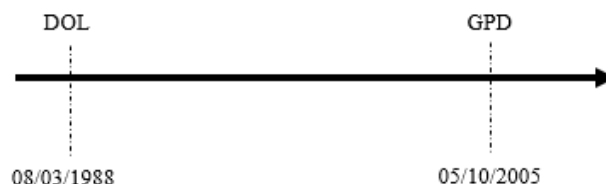


Figure 3.1: Fixed revaluation Rate - Complete tax years

The GMP at GPD is equal to:

$$200 \times (1 + 8.5\%)^{17} = £800.45 \text{ pa}$$

3.3.2 Section 148 Revaluation

GMP increases in line with Section 148 orders [³] (also known as S148 orders) for each complete tax year between the Date of Leaving and GPA. This is equivalent to GMP increase on each 6th April up to the start of the tax year preceding the tax year in which GPA is attained (or death if earlier) [²¹].

Example:

- **Date Of Leaving** : 08/03/1988
- **GPD** : 01/09/2010
- **GMP at Date Of Leaving** : £300 *pa*
- **Tax year earnings** : 1986/87
- **Tax year termination** : 2009/10
- **S148 orders**: 2.23 [⁴]

² *per annum*

³ Table I.1

⁴ Table I.1

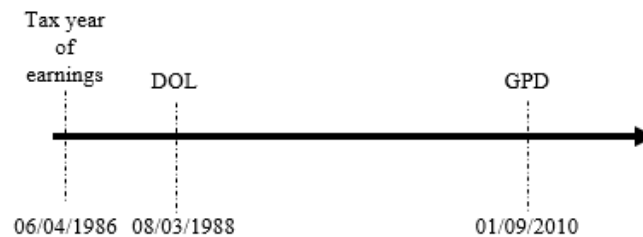


Figure 3.2: Section 148 Revaluation - Complete tax years

The GMP at GPD is equal to:

$$300 \times (1 + 2.23) = £969.00 \text{ pa}$$

3.3.3 Limited rate revaluation (Pre 97 leavers only)

Limited rate revaluation is based on the complete tax years between the years that GMP started to be accrued until its end, that is when the member achieves the GMP Payment Date. The GMP should increase by the lesser of section 148 orders and 5% compound for each complete tax year between Date of Leaving and GMP Payment Age is attained (or death if earlier).

$$\text{Limited Rate Revaluation} = \min(1.05^n; \text{Section 148 Revaluation}) \quad (3.3)$$

Example:

Taking into account the last example, the one for the Section 148 Revaluation, it is calculated the 5% compound for each complete tax years and then apply the formula (3.3).

$$300 \times (1 + 5\%)^{23} = £921.46 \text{ pa}$$

$$\text{Limited Rate Revaluation} = \min(1.05^{23}; 2.23) = 2.23$$

Since the minimum is 2.23, the result will be according to the Section 148 orders.

3.3.4 Late Retirement Factor

As it was seen before, the GPD is the GMP Payment Date, date when men turned 65 and women turned 60, but sometimes some schemes have the NRA above 60. If a woman only retires at 63 the GMP only enters in payment at Normal Retirement Date (NRD). However, this does not change what it was settled. So, if a woman leaves service before retirement, the GMP will still need to be revalued at GPD. When in payment it will be received statutory increases. But if it's considered that a member remains in active service until retirement, the pension will not enter in payment until 3 years after GPD. For cases

like this, when the GMP starts being paid after GPD, it must receive an adjustment called late retirement uplift. The late retirement uplift is divided in two components:

- **Uplift:** Calculated as 1/700 for each week GMP is paid late. The late payment uplift is the reduction factor for early payment when the pension is reduced as a result of being paid longer.

$$Uplift = 1 + \frac{\text{number of complete weeks GMP is late}}{700} \quad (3.4)$$

- **Missed Increases:** GMP payment increases in each payment missed (just for Post-88 GMP)

Example:

The revaluation that is going to be used in this exercise is the fixed rate revaluation and the objective is to calculate the value of the GMP at Normal Retirement Date.

- **Sex:** Male
- **Date of birth:** 10/12/1954
- **Date of leaving:** 30/06/1990
- **GPD:** 10/12/2014
- **NRD:** 10/12/2016
- **Fixed rate:** 7.5 %
- **Pre 88 GMP at DOL:** £104 *pa*
- **Post 88 GMP at DOL:** £208 *pa*
- **Increases in payment:** 3 %



Figure 3.3: Late Retirement Uplift - Complete tax years

The total GMP at GDP is :

$$(104 + 208) \times 1.075^{23} = 548.82 + 1097.64 = \text{£}1,646.45 \text{ pa}$$

The late retirement factor needs to be applied, once the NRD is after GPD (2 years):

$$1 + \frac{2 \times 52}{700} = 1.1486 \quad (3.5)$$

The GMP at NRD, using the formula (3.5) is:

$$548.82 \times 1.1486 + 1097.64 \times 1.1486 \times 1.03^2 = \pounds 1,891.12 \text{ pa}$$

3.4 Worked Example - Step by Step

In order to understand the calculation of GMP an example will be presented.

1. Sex;
2. Date of Birth (DOB);
3. Date which GMP started to be accrued;
4. Date of Leaving (DOL), which cannot be after GPD [5];
5. National insurance contributions for the 1985/86 tax year up to the 1987/88 ;
6. Upper band earnings for the 1985/86 tax year to the 1991/92.

With this data information it will be followed 5 steps, in order to achieve the value of the GMP Total:

1. Once it is known the NICs and the contribution rate of the employee, both are divided in order to calculate the member earnings;
2. The revaluation will be made through the Section 148 orders [6];
3. Sum the Pre 88 GMP and Post 88 GMP;
4. Calculate the working lifetime;
5. Divide by accrual rate.

The main goal of the following example is to demonstrate how this part of the member's pension is calculated step by step, combining the whole information of this chapter.

It is considered a member from a pension scheme that has contracted out and is entitled to GMP.

The data related to the member are:

⁵This is a hypothetical assumption considered to the respective example.

⁶Any other revaluation method could be used.

- **Sex:** Male
- **Date of Birth:** 05/10/1955
- **Date Contracting Out Commenced:** 06/08/1985
- **Date of Leaving:** 03/05/1991

Table 3.2: Earnings figure (1986/87 tax year and prior) [19]

Tax Year	Band earnings	NI contributions	Contribution rate	Band earnings
1985/86	n/a	£400	6.85 %	£5,839.42
1986/87	n/a	£800	6.85%	£11,678.83
1987/88	£12,000	n/a	n/a	£12,000.00

Step 1: Obtaining earning figures

Looking at the table it can be seen that the £12,000 represents the band earnings that begin from 06/04/1987 and not 06/04/1988; the contribution rate is a rate established by the pension scheme and the band earnings are obtain by the division between the NI contributions and the contribution rate.

Step 2: Revaluation with Section 148 orders

It is used the Section 148 orders to revalue the earnings until the member leaves the scheme which is at 03/05/1991. So, the last tax year of earnings is 1991. It is assumed that the income of the member grows £1,000 per year from 1987/88 forward.

Table 3.3: Revalued earnings through Section 148 Orders [19]

Tax Year	Band earnings		Section 148 Orders		Revalued earnings
1985/86	£5,839.42	×	1.658	=	£9,681.758
1986/87	£11,678.83	×	1.523	=	£17,786.858
1987/88	£12,000.00	×	1.419	=	£17,028.000
1988/89	£13,000.00	×	1.304	=	£16,952.000
1989/90	£14,000.00	×	1.182	=	£16,548.000
1990/91	£15,000.00	×	1.101	=	£16,515.000
1991/92	£16,000.00	×	1.000	=	£16,000.000

To simplify the visualization of the rate that must be apply, under the method Section 148, below is an extract to help:

Table 3.4: Section 148 Orders [22]

Tax Year of Earnings	Tax Year of Termination							
	95/96	94/95	93/94	92/93	91/92	90/91	89/90	88/89
1994/95	4.4							
1993/94	7.7	3.1						
1992/93	13.1	8.3	5.0					
1991/92	20.4	15.3	11.8	6.5				
1990/91	32.5	26.9	23.1	17.3	10.1			
1989/90	42.2	36.2	32.1	25.8	18.2	7.3		
1988/89	57.0	50.3	45.8	38.9	30.4	18.4	10.8	
1987/88	70.8	63.5	58.6	51.1	41.9	28.9	20.5	8.7
1986/87	83.4	75.6	70.3	62.2	52.3	38.3	29.4	16.8
1985/86	99.6	91.1	85.4	76.6	65.8	50.6	41.0	27.2
1984/85	112.7	103.7	97.6	88.2	76.7	60.5	50.2	35.6
1983/84	129.8	120.0	113.4	103.3	90.9	73.4	62.3	46.4
1982/83	147.9	137.3	130.2	119.3	105.9	87.0	74.7	57.7
1981/82	173.1	161.5	153.7	141.6	126.9	106.1	92.3	73.6
1980/81	225.7	211.9	202.5	188.2	170.6	145.8	129.7	107.3
1979/80	289.7	273.1	262.0	244.8	223.8	194.0	174.9	148.1
1978/79	341.9	323.1	310.4	291.0	267.1	233.4	211.5	181.2

Step 3: Sum the Pre 88 GMP and Post 88 GMP revalued earnings figures

The Pre 88 GMP is the revalued earnings before 1988, so it is considered the tax years: 1985/86, 1986/87 and 1987/88.

$$Pre88GMP = 9,681.758 + 17,786.858 + 17,028.00 = £44,496.616 pa$$

The Post 88 GMP is the revalued earnings after 1988, so it is considered the tax years: 1988/89, 1989/90, 1990/91, 1991/92.

$$Post88GMP = 16,952.000 + 16,548.000 + 16,515.000 + 16,000.000 = £66,015.000 pa$$

Step 4: Calculate Working Life and Divide by accrual rate

To calculate the working lifetime it is considered the start date and the GMP Payment Date. Once the member is a male, his GPA is when the member turns 65 years. Looking at his date of birth which is 05/10/1955 and adding 65 years, it is obtained his GPD that will be at 05/10/2020. However the working life period ends at the 5th April before GPD, so the GPD is 05/04/2020. The complete tax years between the start date and end date is 35 years. Dividing by the accrual rate:

$$Pre88GMP = \frac{44,496.616}{35 \times 4} = £317.83 pa$$

$$Post88GMP = \frac{66,015.000}{35 \times 5} = £377.22 pa$$

Step 5: GMP Total

The last step is to calculate the total GMP of the members:

$$GMP_{Total} = \sum \frac{Band\ earnings \times S148\ Revaluation}{Accrual\ Rate} = £695.05\ pa$$

GMP JOURNEY

Nowadays, there is a great interest connected to the GMP in the UK, which is expected to stand for a few years: it is called “GMP journey”. A “GMP journey” is split in 4 components:

- **Reconciliation and Rectification:** There is a huge exercise between the pension scheme and the HMRC to manage the GMP amounts in the administration system of the scheme and the regulator. This exercise is split in two phases: Reconciliation and Rectification. The **Reconciliation** compares the scheme data related to the GMP held by HMRC and the **Rectification** changes the benefits of the members according with any changes that may happen with the GMP, following the reconciliation process;
- **Equalization:** It was confirmed by the court that the GMP calculation rules are unequal to men and women due to different accrual rates and retirements ages. So it is needed to equalize benefits. GMP equalization only affects members who accrued benefits between 17 May 1990 and 5 April 1997 (as well as members who have transferred in GMP from this period);
- **Conversion:** Conversion of the GMP benefits in non-GMP pension.

4.1 GMP Equalization

The GMPs reflects many inequalities between men and women, therefore the main goal of this journey step is managing a way to achieve equality. Lloyds judgment intended to require equalization between opposite sex members.

This situation is mainly caused by the different GMP Payment Ages, being 60 for females and 65 for males. This means that female members achieve GPA sooner than

men. Other factor is the accrual rate, once it depends on the GPA, as it can be seen in the formulas (3.1) and (3.2), the accrual rate is inversely proportional to the working lifetime of the member. Since the working lifetime for females is 5 years lower than for males, the accrual rate will be higher. So, on leaving service a female's benefit generally includes higher GMP. However, the revaluation is usually higher but a longer period of revaluation of GMP, up to age 65, can lead to higher benefits for males. There are other two factors that can turn GMP unequal, these factors are the GMPs revaluation at different rate to non-GMP excess, majority favouring females and the increases in payment may be different for GMP and non-GMP, that could favour males or females.

The way to correct these inequalities is taking in consideration some particularities of males and females' members, for example: compare the GMP at Date of Leaving, in order to get the equivalent GMP of the members at the same time and account what the opposite sex should receive. Another option could be calculating the opposite sex by calculating GMP from the beginning, but as it is going to be explained forward, it won't worth it.

4.1.1 Lloyds Case

The high court judgment, Lloyds case, was on 26 October 2018. This judgment occurred because of the GMP inequalities felt by some members of pension schemes, where the court acted in order to protect their rights of equality of treatment in relation to pension benefits. To answer to this claim, the Trustees of the respective pension schemes showed concern and they identified some key issues such as: if there is some obligation to equalize benefits; if there is some method that should be adopted and if so, how should it be implemented; relatively to the past period how can members claim their underpaid benefit; how the transferred in and out of benefits will be treated.

While the judgement relates to the Lloyds bank group scheme it is expected that it expands to other UK defined benefit schemes with GMPs. It was confirmed that the occupational schemes are legally obliged to equalize the differences between men and women [¹], so there is a need to adjust their scheme benefits, especially on contracted-out, in order to remove the inequalities between 90-97 GMPs. These adjustments will also be applied to those who have been underpaid. The payments will be made with an interest rate of 1% which reflects the value of money. These payments exist in order to compensate the members who have received over the years less than they deserve.

It must be taken into account all the inherent inequalities of GMPs (i.e. accrual rate, GPA), since the GMP won't equalize itself. The judgment also confirms that the way that GMP will be paid to the pensioners will depend on the scheme rules and in some cases trustee discretion's. Sometimes it is also needed the employer's consent to address the GMP inequalities.

¹For example the Barber case in May 1990

As it can be related by the judgment, the impacts will vary, depending on the scheme circumstances and it will affect all the interested parties: members, trustees, employers and third parties. To remove the inequalities of the GMPs earned between 17 May 1990 and 5 April 1997, the members will be entitled to additional benefits and some of them may received uplifts over than 10%. The second party are the trustees, who have the responsibility to pay to the members an adjusted benefit, to make policy decisions and to make communications to the member about the changes that have been occur or may occur. The employer will have the obligation to account and recognize the GMP equalization as well as register the journey planning of the company. The last one is the third parties, which have implications for: administrators, scheme actuary, legal advisor and insurers. All of them, must know the adjusted amounts of the benefits.

Other important thing, that was established on the judgment, was clarified the equalization methods that will be acceptable.

4.1.2 Equalization Methods and Applications

Lloyds judgment did not specify which method must be used, so pension schemes can choose which one of the methods they want to apply. It must be considered the particularities of the scheme, in order to choose the best method for GMP inequalities. It should bear in mind that it is not simple to specify which method fits best on the schemes.

The table below gives a succinct information about the methods proposed.

Table 4.1: Equalization Methods Description [14]

Method	Description
A	Equalize each unequal aspect of benefit separately (revaluation, payment age etc.)
B	Provide the better of male/female compared pension on a year-by-year basis.
C1	Same as B, but allow for cumulative benefits before switching.
C2	Same as C1, but include interest on prior benefits (reducing cost).
D1	One-off calculation of value providing additional pension benefit of value equal to the shortfall.
D2	Implement GMP equalization by converting all (equalized) GMP into non-GMP.

Table 4.2: Equalization Methods Permissible [14]

Method	Permissible?
A	Permitted only with sponsor consent
B	Permitted
C1	Permitted
C2	Permitted - Sponsor can require to adopt
D1	Not Permitted
D2	Permitted only with sponsor consent

Once knowing the methods proposed, there are some steps to calculate equalized pension through methods B, C1 and C2 [20]:

1. Calculate the Post 17 May 1990, Pre 5 April 1997 pension at Date of Leaving (90-97 pension);
2. Calculate the equivalent opposite sex pension at Date of Leaving:
 - a. Calculate the equivalent, opposite sex GMP;
 - b. The total pension at DOL should not be changed, so the 90-97 excess pension should be the balancing item.
3. Project the male and female pensions to NRA and for each subsequent year in payment;
4. For methods C1 and C2, calculate the cumulative total of pension payments each year, with and without interest.

4.1.3 Opposite sex

To calculate GMP equalization, one of the important steps is to know how to calculate the opposite sex by adjusting Post 88 GMP for both members. This approach will give the information when the pension is higher for male or female at every age, it is called “Opposite sex uplifts”.

The opposite sex GMPs is considered as follows [20]:

- GMP equalization involves a comparison between a member’s GMP at Date of Leaving and the equivalent GMP if the member was of the opposite sex;
- Constructing the opposite sex basis by calculating the GMP calculation from scratch would be very time consuming and often the data needed isn’t readily available;
- A much quicker approach is to adjust each member’s Post88 GMP by adjusting the pension for the differences in the GMP calculation between males and females;
- It is expected that this approach will be used widely in GMP equalisation calculations to be completed far more efficiently.

To illustrate how opposite sex can be calculated and how it works, some examples will be given. [2]

²The amounts used are weekly amounts because most of the formulas used work with weekly pension amounts.

Example 1: Male member left before age 60

- Sex: Male
- DOB : 06/08/1960
- DOL : 03/05/2000
- Post 88 GMP at DOL : £19 per week

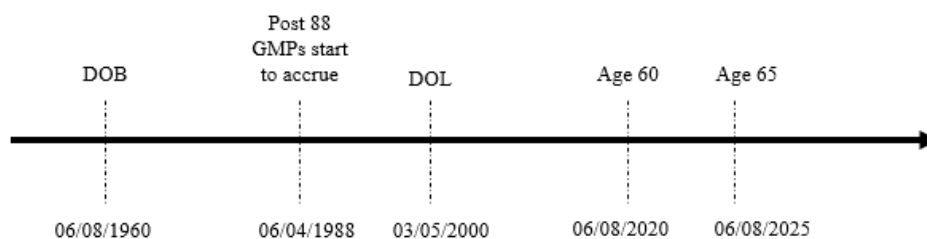


Figure 4.1: Male member left before age 60 - Example

The working lifetime is the complete tax years between 06/04/1978 and 05/04/2025 [3], so in this case, it is 47 years. If the member was a female the complete tax year would be between 06/04/1978 and 05/04/2020, so 42 years.

To achieve the GMP at DOL for the female it is necessary to calculate the GMP gender conversion factor, which is calculated through the working lifetime of female and male members, in this case it is:

$$GMP\ gender\ conversion\ factor_{Female} = \frac{47}{42} = 1.119 = 111.90\%$$

So, if a member was a female, the GMP at DOL would be:

$$£19 \times \frac{47}{42} = £21.26\ per\ week$$

Example 2: Male member left after age 65

- Sex: Male
- DOB : 03/05/1952
- DOL : 03/05/2018
- Post 88 GMP at DOL : £39.87 per week
- Missed April 2018 pension increase : 3%

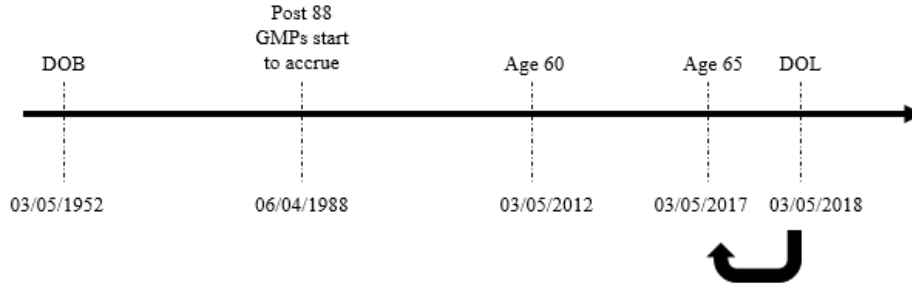


Figure 4.2: Remove the late retirement uplift between age 65 and DOL

Once the member left one year after the GPD, it means that exists a Late retirement uplift that it is calculated for that one year and one missed increase. In order to remove, it is needed to apply the formula (3.4):

$$\left[1 + \frac{(1 \times 52)}{700} \right] \times 1.03 = 1.1065$$

The male member would also receive S148 orders up to the tax year at age 65, 2016/17 tax year. And a female member would receive S148 orders up to the tax year at age 60, 2011/12 tax year. So, it is needed to remove the S148 order between 2011/12 and 2016/17 by obtaining the revaluation order between the 5 April before 60 and the 5 April before age 65, which is 1.083 [4].

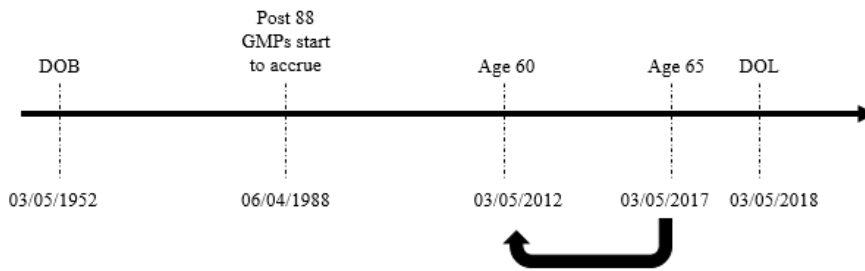


Figure 4.3: Remove the S148 orders between 2011/12 and 2016/17

Now it is needed to calculate the late retirement uplift that a female member would get between age 60 and Date of Leaving. Considering that DOL is 6 years after GPA, it means that exists 6 missed pension increases, in line with September CPI 3% increases, which are 2.2%, 2.7%, 1.2%, 0%, 1% and 3% from 2012 to 2017 [5].

$$Late\ Retirement\ Uplift = \left[1 + \frac{6 \times 52}{700} \right] \times 1.022 \times 1.027 \times 1.012 \times 1 \times 1.01 \times 1.03$$

³Remind that GPD for men is when they achieve 65 and for female is when they achieve 60

⁴Figure I.1

⁵Figure I.2

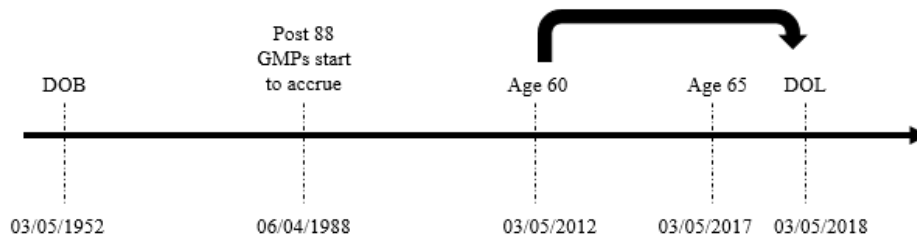


Figure 4.4: Late retirement uplift for female member

The working lifetime for male members (tax years between 06/04/1978 and 03/05/2017) is 39 years and for female members (tax years between 06/04/1978 and 03/05/2012) is 34 years.

So, the female equivalent GMP, per week, is:

$$\text{Female Equivalent GMP} = \text{£}39.87 \times \frac{\left[1 + \frac{6 \times 52}{700}\right] \times 1.022 \times 1.027 \times 1.012 \times 1 \times 1.01 \times 1.03}{\left[1 + \frac{(1 \times 52)}{700}\right] \times 1.03} \times \frac{1}{1.083} \times \frac{39}{34} = \text{£}60.97$$

Example 3: Male member left between age 60 and age 65

- Sex: Male
- DOB : 03/05/1953
- DOL : 03/05/2016
- Post 88 GMP at DOL : £35.13 per week

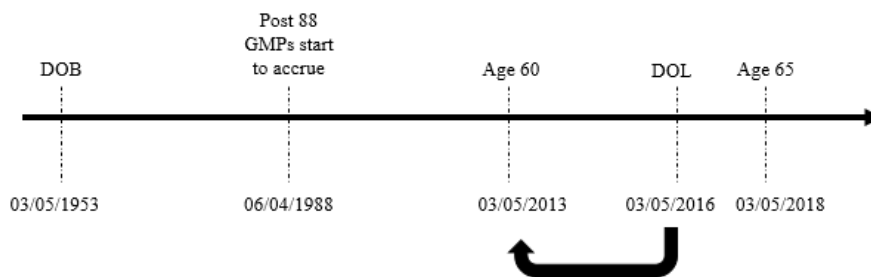


Figure 4.5: Male member left between age 60 and age 65

The male member would also receive S148 orders up to the tax year at age 65, 2016/17 tax year. And a female member would receive S148 orders up to the tax year at age 60, 2012/13 tax year. So, it is needed to remove the S148 order between 2012/13 and 2016/17 by obtaining the order between the 5 April after 60 and the 5 April before DOL, which is 1.063 [6].

⁶Table I.1

For female members, it must be given a late retirement uplift between the age 60 and the Date of Leaving. Once DOL is 3 years after age 60: 52×3 missed weeks and it also need to be considered 3 missed pension increases between age 60 and Date of Leaving ^[7]: $\left[1 + \frac{(3 \times 52)}{700}\right] \times 1.027 \times 1.012 \times 1$

The working lifetime for male members (tax years between 06/04/1978 and 03/05/2018) is 40 years and for female members (tax years between 06/04/1978 and 03/05/2013) is 35 years.

Assuming male Post 88 GMP at DOL is £35.13 per week. Then the female equivalent GMP can be calculated as follows:

$$\text{Female Equivalent GMP} = £35.13 \times \frac{\left[1 + \frac{3 \times 52}{700}\right] \times 1.027 \times 1.012 \times 1}{1} \times \frac{1}{1.063} \times \frac{40}{35} = £48.00$$

4.1.4 Example of GMP Equalization - Step by Step

It will be considered two members, a male and a female, at the same point in time, same Date of Leaving and same total deferred pension. However, the total pension, GMP and Non-GMP are not distributed the same way for both members. Upon leaving service, a female member would usually have accrued a larger GMP amount than an equivalent male. As a result of those differences, at Date of Retirement (DOR), total pension is greater for female members.

The example that follows is from Willis Towers Watson training and every data used is merely representative.

It is considered a XYZ scheme that have the following benefit structure and assumptions:

- All pension receives statutory increases in deferment and payment;
- NRA is 60;
- GMP revalue in deferment with Fixed Rate Revaluation based on the member's Date of Leaving to GPA, but receives no revaluation if NRA is before GPA.

The scheme applies a full anti-franking ^[8] check at GPA if GPA is after NRA.

⁷Table I.2

⁸Post anti-franking check is when the minimum statutory are applied on the pension. The minimum are: For the pre 88 GMP is 0%, for the post 88 GMP is CPI_0_3% and for post 97 excess is LPI_0_5%.

The table below gives all the members information for the step by step example:

Table 4.3: Members Information

	Male	Female
DOB	01/03/1965	
DPSC	01/03/1986	
DOL	30/06/2005	
DOC	30/06/2019	
NRD	01/03/2025	
GPD	01/03/2030	01/03/2025
Fixed rate revaluation	4.50%	
Complete Years (DOL,NRD)	19	
Complete Years (DOL,DOC)	14	
Complete Tax Years (DOL,GPA)	23	18
Revaluation Order	1.403	
GMP Gender Conversion Factor	100.0%	111.4%

Table 4.4: Unequalised pension and Assumptions

Unequalised pension accrued between 17 May 1990 and 5 April 1997	
Tranche of Benefits	Pension at DOL
Post 90 GMP	£500
Post 90 Excess	£500
Assumptions	
Consumer Price Index (CPI) (in deferment)	3.43%
Post 88 GMP in payment	1.80%
Interest Rate (for Method C2)	2.00%

Step1: Using the information given on the Table 4.3, it is calculated the pension at Date of Leaving. Remind that the total pension is composed by the sum of excess and GMP.

Table 4.5: Pension at Date of Leaving

	Male	Female
Post 90 GMP at DOL	£500.00	£556.81
Post 90 excess at DOL	£500.00	£443.18
Total pension at DOL	£1,000.00	£1,000.00

The post 90 GMP at DOL for female member is calculated through the post 90 GMP at DOL of the original member (male member) and multiplied by the conversion factor of 111.4 %. As expected the total pension at DOL remains the same for both members.

However, the total pension is calculated when the member achieves the normal retirement age.

As it can be seen on the assumptions the GMP doesn't receive revaluation if NRA is before GPA, consequently the GMP at retirement is:

Table 4.6: Pension at Normal Retirement Date

	Male	Female
Post 90 GMP at NRD	£500.00	£1,229.73
Post 90 excess at NRD	£830.35	£735.99
Total pension at NRD	£1,330.35	£1,965.72

The value of post 90 GMP at NRD for male members does not receive revaluation to GMP once the NRD (60) proceeds GPA (65).

Therefore, the only members that will receive GMP revaluation when achieving GPA will be the male members:

$$Post\ 90\ GMP\ GPA = Post\ 90\ GMP\ DOL \times (1 + Fixed\ Revaluation\ Rate)^{CTY(DOL,GPA)} \quad (4.1)$$

Where:

- The CTY are the complete tax years. The GMP is increased at a fixed rate for each Complete Tax Year between the Date of Leaving and GMP Payment Age. Each tax years starts at 6 April of every year and ends on the 5 April of the next year.

Such as GMP, Excess also needs to be calculated:

$$Post\ 90\ Excess = Post\ 90\ Excess\ DOL \times Revaluation\ Order \times (1 + CPI(in\ deferment))^{[CY(DOL,NRD)-CY(DOL,DOC)]} \quad (4.2)$$

Table 4.7: Pension at age 65

	Male	Female
Post 90 GMP at 65	£1,376.08	£1,344.36
Post 90 excess at 65	£830.35	£735.99
Total pension at 65	£2,206.43	£2,080.45

So the pension projections from NRA (60) until the age 80 [⁹] are:

⁹It could be until 121, however the exercise goes until 80 in order to simplify

Table 4.8: Pension projections from NRA until age 80 for Male member

Age	Male		
	Post 90 GMP	Post 90 Excess	Total Post 90 Pension
60	£500.00	£830.35	£1,330.35
61	£500.00	£830.35	£1,330.35
62	£500.00	£830.35	£1,330.35
63	£500.00	£830.35	£1,330.35
64	£500.00	£830.35	£1,330.35
65	£1,376.08	£830.35	£2,206.43
66	£1,400.85	£830.35	£2,231.20
67	£1,426.07	£830.35	£2,256.42
68	£1,451.74	£830.35	£2,282.09
69	£1,477.87	£830.35	£2,308.22
70	£1,504.47	£830.35	£2,334.82
71	£1,531.55	£830.35	£2,361.90
72	£1,559.12	£830.35	£2,389.47
73	£1,587.18	£830.35	£2,417.53
74	£1,615.75	£830.35	£2,446.10
75	£1,644.83	£830.35	£2,475.18
76	£1,674.44	£830.35	£2,504.79
77	£1,704.58	£830.35	£2,534.93
78	£1,735.26	£830.35	£2,565.61
79	£1,766.49	£830.35	£2,596.84
80	£1,798.29	£830.35	£2,628.64

Step 2: At this step it is supposed to calculate the equivalent pension at DOL for the opposite sex.

The calculation of Post 90 GMP for the female member is :

$$Post\ 90\ GMP\ DOL = Post\ 90\ GMP\ DOL_{Male} \times GMP\ gender\ conversion\ factor \quad (4.3)$$

Once the total post 90 pension at DOL for male and female must be the same, £1,000:

$$Post\ 90\ Excess\ DOL = Total\ Post\ 90\ Pension\ DOL - Post\ 90\ GMP\ DOL \quad (4.4)$$

If a member is already receiving a pension at GPA, the post 90 GMP pension for the age after the GPA, the formula that will be used is:

$$Post\ 90\ GMP_{X>GPA} = Post\ 90\ GMP_{GPA} \times (1 + Post\ 90\ GMP\ in\ payment\ rate)^{(X-GPA)}, \quad GPA < X < 80 \quad (4.5)$$

Such as GMP, Excess also needs to be calculated:

$$Post\ 90\ Excess = Post\ 90\ Excess\ DOL \times Revaluation\ Order \times (1 + CPI(in\ deferment))^{[CY(DOL,NRD)-CY(DOL,DOC)]} \quad (4.6)$$

Table 4.9: Pension projections from NRA until age 80 for Female member

Age	Female		
	Post 90 GMP	Post 90 Excess	Total Post 90 Pension
60	£1,229.73	£735.99	£1,965.72
61	£1,251.87	£735.99	£1,987.86
62	£1,274.40	£735.99	£2,010.39
63	£1,297.34	£735.99	£2,033.33
64	£1,320.69	£735.99	£2,056.68
65	£1,344.46	£735.99	£2,080.45
66	£1,368.66	£735.99	£2,104.65
67	£1,393.30	£735.99	£2,129.29
68	£1,418.38	£735.99	£2,154.37
69	£1,443.91	£735.99	£2,179.90
70	£1,469.90	£735.99	£2,205.89
71	£1,496.36	£735.99	£2,232.35
72	£1,523.29	£735.99	£2,259.28
73	£1,550.71	£735.99	£2,286.70
74	£1,578.62	£735.99	£2,314.61
75	£1,607.04	£735.99	£2,343.03
76	£1,635.97	£735.99	£2,371.96
77	£1,665.42	£735.99	£2,401.41
78	£1,695.40	£735.99	£2,431.39
79	£1,725.92	£735.99	£2,461.91
80	£1,756.99	£735.99	£2,492.98

Step 3 : After obtaining the total pension projections, it must be set up the total cumulative amounts for both members. These amounts can be calculated through the following formula:

$$Cumulative Total_X = \sum_{x=60}^X Total Post 90 Pension_X, 60 \leq X \leq 80 \quad (4.7)$$

Furthermore, it is also needed to calculate the cumulative total with interest (after age 61):

$$\text{Cumulative Total } IT_X = \text{Cumulative Total } IT_{X-1} + \text{Total Post 90 Pension}_X \times (1 + IR \times 0.5) \quad (4.8)$$

Table 4.10: Pension projections from NRA until age 80 for Male member with cumulative totals

Age	Male		
	Total Post 90 Pension	Cumulative Total	Cumulative total with interest
60	£1,330.35		
61	£1,330.35	£1,330.35	£1,343.65
62	£1,330.35	£2,660.70	£2,713.91
63	£1,330.35	£3,991.05	£4,110.78
64	£1,330.35	£5,321.40	£5,534.25
65	£2,206.43	£6,651.75	£7,869.17
66	£2,231.20	£8,858.18	£10,255.72
67	£2,256.42	£11,089.38	£12,711.87
68	£2,282.09	£13,345.80	£15,238.57
69	£2,308.22	£15,627.89	£17,836.79
70	£2,334.82	£17,936.11	£20,507.52
71	£2,361.90	£20,270.93	£23,251.76
72	£2,389.47	£22,632.83	£26,070.54
73	£2,417.53	£25,022.30	£28,964.90
74	£2,446.10	£29,885.93	£34,984.64
76	£2,504.79	£32,361.11	£38,112.20
77	£2,534.93	£34,865.90	£41,319.70
78	£2,565.61	£37,400.83	£44,608.28
79	£2,596.84	£39,966.44	£47,979.11
80	£2,628.64	£42,563.28	£51,433.37

Table 4.11: Pension projections from NRA until age 80 for Female member with cumulative totals

Age	Female		
	Total Post 90 Pension	Cumulative Total	Cumulative total with interest
60	£1,965.72		
61	£1,987.86	£1,965.72	£1,985.38
62	£2,010.39	£3,953.58	£4,055.19
63	£2,033.33	£5,963.97	£6,187.92
64	£2,056.68	£7,997.30	£8,384.45
65	£2,080.45	£10,053.98	£10,645.65
66	£2,104.65	£12,134.43	£12,972.43
67	£2,129.29	£14,239.08	£15,365.70
68	£2,154.37	£16,368.37	£17,826.40
69	£2,179.90	£18,522.74	£20,355.47
70	£2,205.89	£20,702.64	£22,953.87
71	£2,232.35	£22,908.53	£25,622.60
72	£2,259.28	£25,140.88	£28,362.64
73	£2,286.70	£27,400.16	£31,175.02
74	£2,314.61	£29,686.86	£34,060.78
75	£2,343.03	£32,001.47	£37,020.98
76	£2,371.96	£34,344.50	£40,056.69
77	£2,401.41	£36,716.46	£43,169.00
78	£2,431.39	£39,117.87	£46,359.03
79	£2,461.91	£41,549.26	£49,627.92
80	£2,492.98	£44,011.17	£52,976.82

Step 4: The final step consists in applying an equalization method, that must fit on the scheme. There are three methods: Method B, Method C1 and Method C2. All of them compare the total post 90 pension between male and female members.

Method B

This method takes the highest total post 90 pension of the male and female members each year and that will be the value that will be paid to them, meaning that the members will receive not according to their sex, but according to who, at that year, has the highest pension.

As it can be seen on the following table and graphic, the members will be paid as female until age 64 and from 65 onward they will be paid as males. For this reason, females start receiving GMP at 60 and males at 65, so the total amount accrued by females will be higher to 60 until 65. However, it changes at age 65, male members will start to receive GMP and at that moment that amount is immediately higher than the female GMP. Also the post 90 excess for males is higher than for females due to the conversion factor.

Taking into account the calculated values for the total post 90 pension at the Tables 4.8 and 4.9, it is projected the pension to pay under method B.

Table 4.12: Method B

Age	Pension to pay under method B
60	£1,965.72
61	£1,987.86
62	£2,010.39
63	£2,033.33
64	£2,056.68
65	£2,206.43
66	£2,231.20
67	£2,256.42
68	£2,282.09
69	£2,308.22
70	£2,334.82
71	£2,361.90
72	£2,389.47
73	£2,417.53
74	£2,446.10
75	£2,475.18
76	£2,504.79
77	£2,534.93
78	£2,565.61
79	£2,596.84
80	£2,628.64

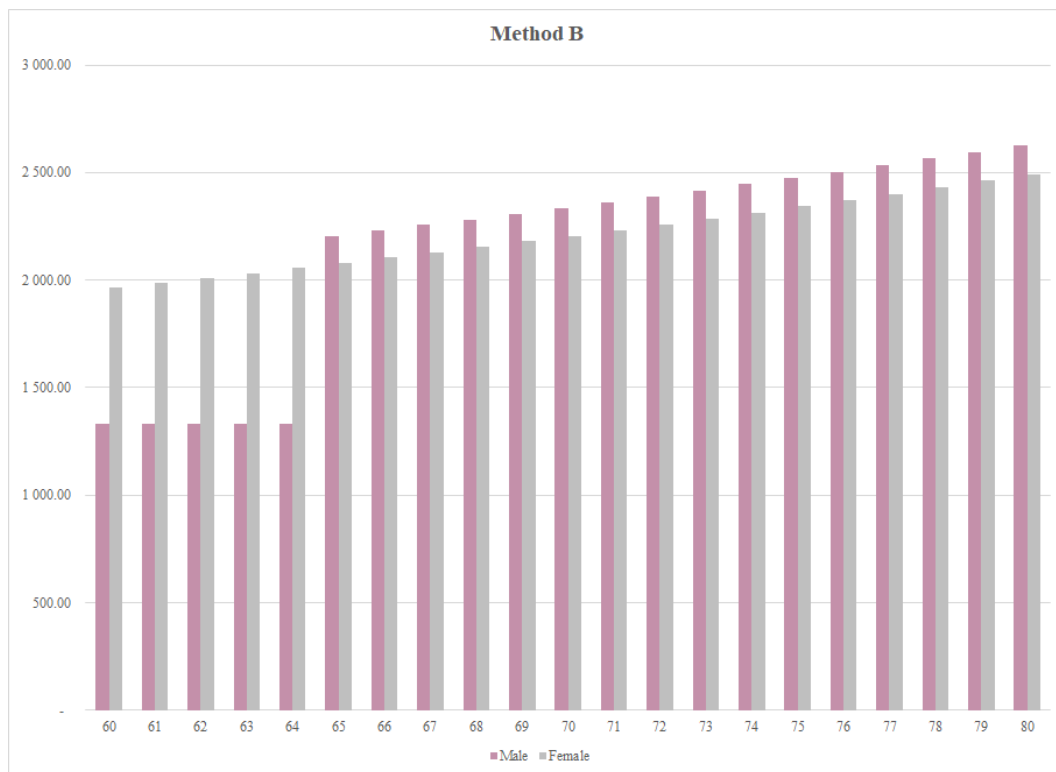


Figure 4.6: Pension to pay under Method B by age

Method C1

This method takes, in the first year, the highest of the male and female total post 90 pension. In subsequent years, takes the member with the highest cumulative total each year. So, if the female cumulative total is higher than the male cumulative total, the method will select the female total post 90 pension, otherwise it will select the male total pension.

Considering the values of total post 90 pension and cumulative total at the Tables 4.10 and 4.11 for males and females and using the formula (4.7), it is obtained the results of the pension to pay under method C1.

Table 4.13: Pension to pay under Method C1

Age	Pension to pay under method C1
60	£1,965.72
61	£1,987.86
62	£2,010.39
63	£2,033.33
64	£2,056.68
65	£2,080.45
66	£2,104.65
67	£2,129.29
68	£2,154.37
69	£2,179.90
70	£2,205.89
71	£2,232.35
72	£2,259.28
73	£2,286.70
74	£2,314.61
75	£2,343.03
76	£2,371.96
77	£2,401.41
78	£2,431.39
79	£2,461.91
80	£2,492.98

As it can be seen by the table and the graphic, the members will be paid as female until age 80, once the cumulative total of female is always higher than the cumulative total of males.

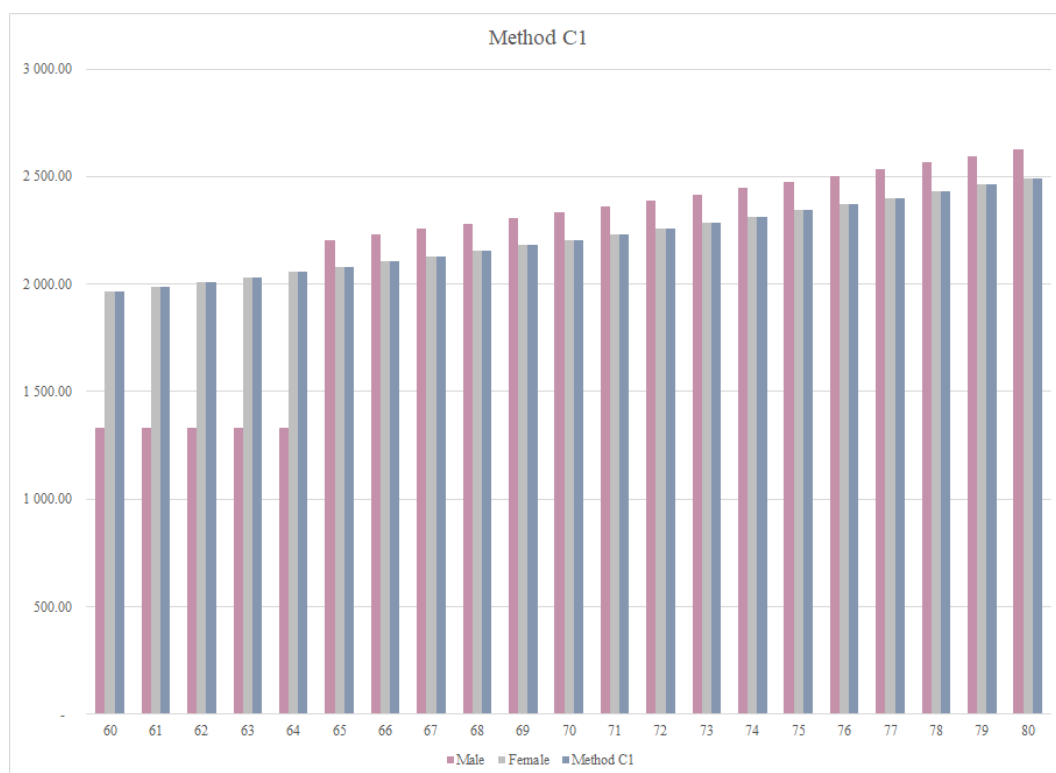


Figure 4.7: Pension to pay under Method C1 by age

Method C2

For Method C2, in the first year, takes the highest of the male and female pension. In subsequent years, takes the pension with the highest cumulative total with interest each year. Where the interest rate applied each year is on the Table 4.4. So, if the cumulative total with interest of female is higher than the cumulative total with interest of male, the method will select the total 90 post pension of female, otherwise total post 90 pension of male.

Considering the values of total post 90 pension and cumulative total with interest at the Tables 4.10 and 4.11 for males and females and using the formula (4.8), it is obtained the results of the pension to pay under method C2.

Table 4.14: Pension to pay under Method C2

Age	Pension to pay under method C2
60	£1,965.72
61	£1,987.86
62	£2,010.39
63	£2,033.33
64	£2,056.68
65	£2,080.45
66	£2,104.65
67	£2,129.29
68	£2,154.37
69	£2,179.90
70	£2,205.89
71	£2,232.35
72	£2,259.28
73	£2,286.70
74	£2,314.61
75	£2,343.03
76	£2,371.96
77	£2,401.41
78	£2,431.39
79	£2,461.91
80	£2,492.98

The graphic evidences that the members will receive as a female the entire period, once the cumulative total with interest of female is, between age 60 and age 80, always higher than the cumulative total with interest of male.

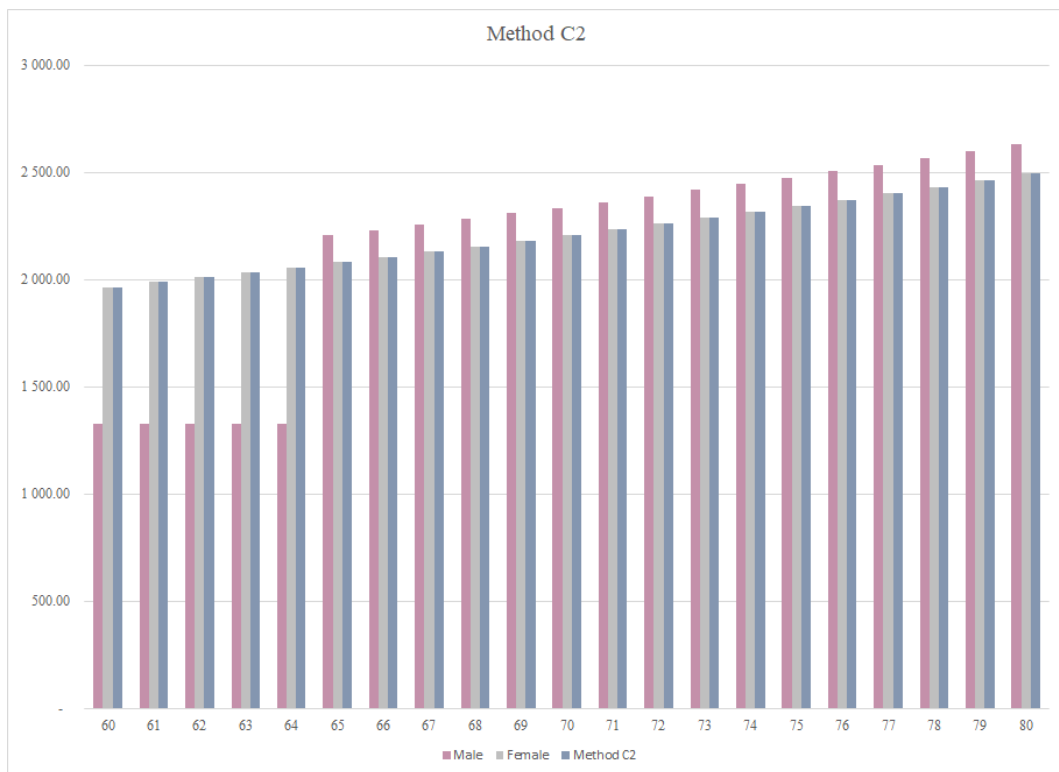


Figure 4.8: Pension to pay under Method C2 by age

After the calculations of the three methods, it is concluded that the method that must be used is Method C2. The Method C2 is considered the method that presents the lowest cost, since it is the one that indicates, for every projected year, a clear attribution according to the member that the pension will be paid, in this case, female member. The application of an interest rate, along the years, guarantees an accurate pension valuation, avoiding changes to the methods.

4.2 GMP Conversion

The last step of "GMP Journey" is the conversion of the GMP benefits in standard benefits which are easier to manage and to consider in the calculations. This will provide to pension schemes less costs of data administration and of actuarial calculations, and it will make the information clearer for the scheme members and for the State.

This process is being considered due to the simplicity that it can bring to Guaranteed Minimum Pension and to some uncertainty about the GMP equalization process.

GMP conversion considers the existing benefits of each member as well as the value of the uplift expected from equalization and provides to the scheme members a new benefit of equivalent value. This new benefit will also provide to male and female members equality, being the main difference from equalization not requiring dual records to calculate future pension payments. This means that the calculations of the future benefits will be calculated as one, as a single "one step process". [3]

This method allows to put an actuarial value on benefits accrued between 17 May 1990 and 5 April 1997. It takes the higher of the value of a member's benefits and the value of the opposite sex during the period and converts this higher value into benefits that are no longer subject to the (unequal) requirements of the GMP legislation. [2]

Under conversion, the pension schemes do not need to require comparisons between men and women in order to determine which of the sexes has the higher pension value and then pay the higher of the both each year and do not longer have benefits subject to GMP rules.

Conversion makes the process easier [10] and cheaper in the long term, however there are some safeguards that must be applied [8]:

- GMPs must be replaced with actuarial equivalent benefits (or more valuable benefits);
- Conversion of GMPs to money purchase benefits are not allowed;
- Pensions in payment may not be reduced;
- Survivors' benefits must be provided;
- The employer must consent to the conversion;
- The affected members must be consulted.

Despite the permission of the conversion, it has rarely been put into practice.

¹⁰e.g remove restrictions caused by GMPs for example in early retirement and cash commutation

4.2.1 10 steps of GMP conversion process

The GMP conversion process must follow a 10 step process, as described on Department of Work and Pensions (DWP) guidance, where they set out each step. The objective is to assist occupational schemes that still presents inequalities in their benefits, due to unequal guaranteed minimum pensions.

These 10 steps can be "divided" in three stages: Preparation (Steps 1,2,3 and 4), Calculations (Steps 5, 6 and 7) and Implementation (Steps 8, 9 and 10):

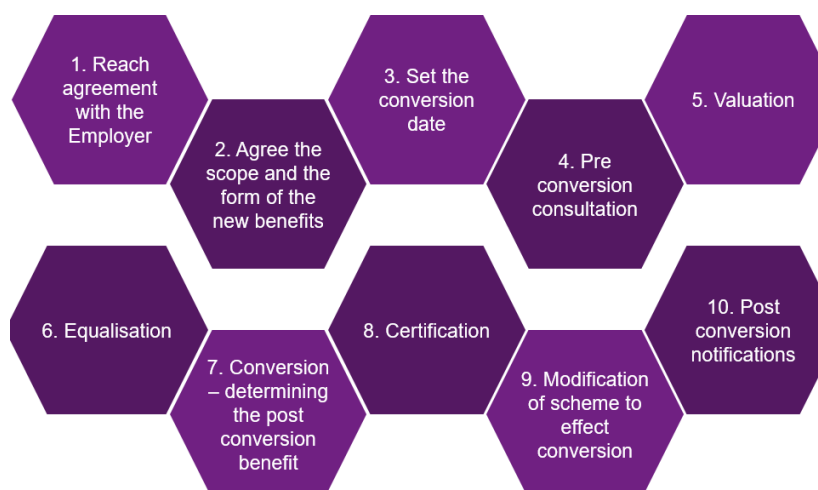


Figure 4.9: 10 steps of GMP Conversion process [24]

On annex 2 there is an extract of the legislation where it can be seen a detailed explanation of the stages referred on the Figure 4.9.

4.2.2 Methods for conversion

The equalization of benefits for men and women were set as an obligation in order to change the results that produce unequal GMPs. Relatively to the methods, the Judge decided for a method that allows an equalization which follows a principle of minimum interference, meaning that the method C2 is the only method that Trustees can adopt.

The method D2 was not available at November 2018, however, the Judge said that it could be adopted by the banks to convert benefits once it is a lawful method. At 6 December 2018, it was confirmed that is not necessary to equalize benefits to implement method D2.

Therefore, method D2 allows the actuary to determine the higher of the actuarial equivalents of the unequal female and male pensions, in order to achieve the purposes of GMP conversion. It was also clarified that the actuary is entirely responsible for the actuarial assumptions used and for the determination of the actuarial equivalence. [2]

Table 4.15: D1 versus D2 versus conversion after C2 [24]

D2 (allowed)	D1 (ruled out)	C2 then convert (allowed)
Calculate actuarial value on higher of male or female benefits	Retain current pension with inbuilt inequality for all members	Equalise first using C2
Convert this into a new pension using formulas that do not have bias between men and women	Calculate actuarial value of incremental benefit from equalization	Calculate actuarial value of equalized benefits
	Convert this incremental pension into an additional pension	Convert this into a new pension using formulas that do not have bias between men and women

4.2.2.1 Steps for calculating equalised pension method D2 (via D1)

Method D2 is calculated according the following steps [24]:

1. Calculate the Post 17 May 1990, Pre 5 April 1997 pension at Date of Leaving;
2. Calculate the equivalent opposite sex pension at Date of Leaving;
 - a. Calculate the equivalent, opposite sex GMP;
 - b. The total pension at DOL should not be changed, so the 90-97 excess pension should be the balancing item.
3. Calculate the present value of the male and female pensions;
4. The equalized pension is as follows:
 - a. If the member's actual pension has the highest present value, then no uplift required;
 - b. If the opposite sex pension has a higher present value, grant the member an additional pension with the same actuarial value as the difference between the 2 PVs.
5. For pensioners, a test is carried out to establish whether any back payments are due a result of applying one of the other permitted equalization methods;
6. Convert GMP to non-GMP pension.

4.2.3 Example of GMP Conversion - Step by Step

To demonstrate how conversion works, it will be presented a very simple example in order to understand the main idea behind it. All the assumptions are full responsibility from the actuary since there is not yet established assumptions for this method.

So, the assumptions are [¹¹]:

Table 4.16: Assumptions

Normal Retirement Age (NRA)	60
GMP annuity Increases	0.025
Discount Rate	0.05

- GMP and Excess are already revalued and the calculations until normal retirement age are already done in order do simplify step 1;
- GMP and Excess don't suffer any increase in payment;
- The conversion date is considered when the member turns 60 years old;
- It is considered that Excess annuity does not suffer any increase;
- The Excess annuities used are the same for pre and post conversion;
- It is used an unisex mortality table;

Since the **step 1**, **step 2** and **step 3** are already clarified, the steps that will be calculated onward are the **step 4**, **step 5** and **step 6**.

¹¹On the exercise it will be considered ages between normal retirement age and 80, however it can go further than that age.

Table 4.17: Pension and annuities for Female member

	Female Member			
	90-97 XS	90-97 GMP	XS annuity 0%	GMP annuity at 2.5%
60	10,000	5,000	0.975900073	1.012724108
61	10,000	5,000	0.925176319	0.984088533
62	10,000	5,000	0.876833301	0.955983869
63	10,000	5,000	0.83078878	0.928427545
64	10000	5,000	0.786869013	0.901329743
65	10,000	5,000	0.744835219	0.874511106
66	10,000	5,000	0.704481111	0.847809627
67	10,000	5,000	0.665630186	0.821080739
68	10,000	5,000	0.628133462	0.794197748
69	10,000	5,000	0.591867309	0.767052235
70	10,000	5,000	0.556731811	0.73955502
71	10,000	5,000	0.522648902	0.711636737
72	10,000	5,000	0.489560946	0.68324891
73	10,000	5,000	0.457428963	0.654364465
74	10,000	5,000	0.426231305	0.62497876
75	10,000	5,000	0.395961779	0.595109723
76	10,000	5,000	0.366628101	0.564798316
77	10,000	5,000	0.338249968	0.534108235
78	10,000	5,000	0.310857068	0.50312526
79	10,000	5,000	0.284487123	0.471956371
80	10,000	5,000	0.25918351	0.440727828

$$Liability_{Female} = \left[\sum_{x=60}^X a_{GMP} \times 9097GMP \right] + \left[\sum_{x=60}^X a_{XS} \times 9097XS \right], 60 \leq X \leq 80$$

$$Liability_{Female} = \text{£}198,438.92$$

Table 4.18: Pension and annuities for Male member

Male Member				
	90-97 XS	90-97 GMP	XS annuity 0%	GMP annuity at 2.5%
60	15,000	0	0.97590007	0.975900073
61	15,000	0	0.92517632	0.925176319
62	15,000	0	0.8768333	0.876833301
63	15,000	0	0.83078878	0.83078878
64	15,000	0	0.78686901	0.786869013
65	10,000	5,000	0.74483522	0.744835219
66	10,000	5,000	0.70448111	0.704481111
67	10,000	5,000	0.66563019	0.665630186
68	10,000	5,000	0.62813346	0.628133462
69	10,000	5,000	0.59186731	0.591867309
70	10,000	5,000	0.55673181	0.556731811
71	10,000	5,000	0.5226489	0.522648902
72	10,000	5,000	0.48956095	0.489560946
73	10,000	5,000	0.45742896	0.457428963
74	10,000	5,000	0.42623131	0.426231305
75	10,000	5,000	0.39596178	0.395961779
76	10,000	5,000	0.3666281	0.366628101
77	10,000	5,000	0.33824997	0.338249968
78	10,000	5,000	0.31085707	0.310857068
79	10,000	5,000	0.28448712	0.284487123
80	10,000	5,000	0.25918351	0.25918351

$$Liability_{Male} = \left[\sum_{y=60}^Y a_{XS} \times 9097XS \right] + \left[\sum_{w=65}^W a_{XS} \times 9097XS + \sum_{w=65}^W a_{GMP} \times 9097GMP \right],$$

$$60 \leq Y \leq 64, 65 \leq W \leq 80$$

$$Liability_{Male} = \text{£}182,077.26$$

The higher value corresponds to the female member, that will be considered for the next step.

Table 4.19: Total Liability

Total Liability	
Female member	£198,438.92
Male member	£182,077.26

Once the value of the total liability is known and on the assumptions it is referred that the annuity of excess will be equal between Pre and Post GMP conversion pension, it is possible to calculate the Post GMP Conversion Pension.

$$Post\ GMP\ Conversion\ Pension = \frac{Max(Liability_{Female}, Liability_{Male})}{\sum_{x=60}^X a_{XS}}, 60 \leq X \leq 80$$

Table 4.20: Summary to achieve Post GMP Conversion Pension

	Total Liability	Pre GMP Conversion pension	Post GMP Conversion Pension
Female Member	£198,438.92	£15,000.00	£16,347.92
Male Member	£182,077.26		

As it can be seen, the value of Post GMP conversion pension is higher than the Pre GMP conversion pension, which was the expected result, since one of the safeguards of the application of this process is that GMP must be replaced with actuarial equivalent benefits (or more valuable benefits) [12].

¹²The value on the Table 4.20 corresponds to the value of age 60, however until age 80 the value remains constant.

CONCLUSION

Guaranteed Minimum Pension represents the part of the pension that brings more concerns to the pension schemes. The processes that were developed on this report tend to bring some light to the problems that may exist around these topic.

In the first place, the main focus was trying to find a way to equalize the pension between male and female members, since it wasn't equal due to differences at the GMP payment age (Age 60 for females and age 65 for males). That difference influences the way GMP starts to be revalued and creates a gap between both pension, once it will influence the rates of the revaluation, the increases in payment, the accrual rate and working lifetime. In order to solve this gap, the Lloyd's Judgment proposes three equalization methods, each of them were presented on the worked examples. After the working examples, it was concluded that the one that better fits on the schemes by it's lower costs was method C2 and it is expected to be used by the majority of the schemes.

Afterwards, GMP conversion starts to be taken in consideration with the expectation of turning the evaluation of GMP easier. There are some points about GMP conversion that aren't still clarified by the Department of Work and Pensions, although there is a 10 steps guide ^[1] that helps how to follow the process. Some assumptions, such as GMP conversion date, pension increases and discount rate, are actuary's responsibility.

There are two methods allowed for conversion: Method D2 and Method C2 then convert. The method D2 started to be allowed at 6 December 2018, when the Judge confirmed that it wasn't necessary to equalize benefits to implement Method D2. For this reason the method applied to the worked example was the Method D2 instead of the Method C2 then convert.

Applying the method D2 it can be concluded some advantages and disadvantages. Some of the advantages are: it takes much less time to do the calculations (since it does

¹An excerpt can be consulted at Annex 2

not have dual records), and once set up it becomes easier; the benefits become cheaper to ensure; it allows simplicity on the benefits, once it does not have step ups and anti-franking; it becomes easier to communicate the information to the members of the scheme and to the State; and it has less costs at data administration and actuarial calculations. The Method also has its disadvantages: the risk is funded by the Trustees, once it is made member by member and there is the possibility of an error in one of the calculations. In a case like that, the costs can be really high; in some cases it can be required rectification points, which takes too long and brings some disagreement; it can lead to a lot of tax issues, that can appear every year (if it implies a lot of tax issues Trustees can opt to not to do the conversion); and it is needed extra careful with the pension increases.

Despite looking to be a good option, conversion isn't still in practice, once there is a lot of points that are left to be clarified and also due to the concerns about the tax issues and the high taxes that the pension schemes are subjected to. Until now, only one pension scheme decided to apply GMP conversion (this is expected to happen at 2021), however it will happen in a very particular circumstance. In this case, the scheme will be buy-out and conversion will turn the benefits simpler to explain and to classify, and without it the costs would be high. Although, it supports a lot of risk and the scheme has to ensure a suitable budget.

This report only explains the general calculation method of GMP conversion in a simplified way, using hypothetical assumptions. The example presented is merely academic and it is needed to bear in mind that in a pension scheme there are many variables and implications that are not specified ^[2].

²For example: spouses fraction, transfer-ins, Additional Voluntary Contributions, other type of benefits that the member may have, different normal retirement ages, and many others.

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ANNEX 1

Figure 20. Section 148 Orders – revaluation of earnings factors (formerly Section 21 Orders)

Tax year of earnings	Tax year of termination												
	19/20 %	18/19 %	17/18 %	16/17 %	15/16 %	14/15 %	13/14 %	12/13 %	11/12 %	10/11 %	09/10 %	08/09 %	07/08 %
1978/79	846.7	820.9	794.1	771.5	754.4	741.7	734.2	719.5	705.0	686.9	677.6	654.2	623.8
1979/80	735.6	712.6	689.2	669.2	654.1	642.9	636.3	623.3	610.5	594.5	586.3	565.7	538.8
1980/81	596.1	579.1	559.3	542.8	530.0	520.7	515.1	504.3	493.8	480.2	473.3	458.1	433.7
1981/82	454.8	488.7	452.2	438.2	427.8	419.8	415.2	408.1	397.1	385.9	380.2	365.7	347.0
1982/83	431.0	416.6	401.5	388.8	379.2	372.1	367.9	359.6	351.5	341.4	336.1	323.0	306.0
1983/84	393.1	379.6	365.7	353.9	345.0	336.4	334.5	326.6	319.2	309.8	305.0	292.8	276.9
1984/85	356.5	344.1	331.2	320.2	312.0	305.9	302.3	295.2	288.2	279.5	275.0	263.7	249.0
1985/86	328.3	316.6	304.5	294.2	286.5	280.6	277.4	270.7	264.2	256.0	251.7	241.2	227.4
1986/87	293.3	282.6	271.4	262.0	254.9	249.7	246.5	240.4	234.4	226.9	223.0	213.3	200.7
1987/88	266.2	256.2	245.8	237.1	230.4	225.6	222.7	217.0	211.3	204.3	200.7	191.7	179.9
1988/89	236.9	227.7	218.1	210.1	204.0	199.5	196.8	191.8	186.4	180.0	176.7	168.4	157.5
1989/90	204.0	195.7	187.1	179.9	174.4	170.3	167.9	163.2	158.5	152.7	149.7	142.2	132.4
1990/91	183.3	175.6	167.6	160.8	155.7	151.9	149.7	145.3	140.9	135.5	132.7	125.7	116.6
1991/92	157.3	150.3	143.0	136.9	132.2	128.8	126.6	122.8	118.8	113.9	111.4	105.0	96.7
1992/93	141.6	135.1	128.2	122.4	116.1	114.8	112.9	109.2	105.5	100.6	98.5	92.5	84.7
1993/94	130.1	123.9	117.3	111.8	107.7	104.6	102.6	99.2	95.7	91.3	89.0	83.3	75.9
1994/95	123.2	117.1	110.8	105.5	101.4	98.5	96.7	93.2	89.8	85.5	83.3	77.8	70.7
1995/96	113.8	108.0	101.9	96.8	93.0	90.1	88.4	85.1	81.8	77.7	75.6	70.3	63.5
1996/97	108.0	102.3	96.4	91.4	87.7	84.9	83.3	80.0	76.8	72.9	70.8	65.7	59.0
1997/98	98.1	92.7	87.1	82.3	78.8	76.1	74.5	71.5	68.4	64.6	62.7	57.8	51.4
1998/99	89.4	84.2	78.6	74.3	70.9	68.4	66.9	63.9	61.0	57.4	55.5	50.9	44.8
1999/00	81.7	76.8	71.6	67.3	64.0	61.6	60.1	57.3	54.5	51.1	49.3	44.6	38.9
2000/01	71.0	66.3	61.5	57.4	54.3	52.0	50.7	48.0	45.4	42.1	40.4	36.2	30.7
2001/02	64.4	59.9	55.3	51.3	48.4	46.2	44.9	42.3	39.8	36.8	35.0	31.0	25.7
2002/03	57.6	53.3	48.9	45.1	42.2	40.1	38.9	36.4	34.0	31.0	29.5	25.6	20.5
2003/04	52.1	48.0	43.7	40.0	37.3	35.3	34.1	31.7	29.4	26.5	25.0	21.2	16.3
2004/05	46.6	42.6	38.4	34.9	32.3	30.3	29.2	26.9	24.6	21.8	20.4	16.8	12.1
2005/06	40.8	37.0	33.0	29.6	27.1	25.2	24.1	21.9	19.7	17.0	15.6	12.2	7.8
2006/07	36.2	32.5	28.6	25.3	22.9	21.1	20.0	17.9	15.8	13.2	11.8	8.5	4.1
2007/08	30.6	27.2	23.5	20.4	18.0	16.3	15.3	13.2	11.2	8.7	7.4	4.2	
2008/09	25.5	22.1	18.6	15.5	13.3	11.8	10.6	8.7	6.7	4.3	3.1		
2009/10	21.8	18.4	15.0	12.1	9.9	8.3	7.3	5.4	3.5	1.2			
2010/11	20.3	17.0	13.6	10.7	8.8	7.0	6.0	4.1	2.3				
2011/12	17.8	14.4	11.1	8.3	6.1	4.6	3.6	1.8					
2012/13	15.5	12.4	9.1	6.3	4.3	2.7	1.8						
2013/14	13.5	10.4	7.2	4.5	2.4	0.9							
2014/15	12.5	9.4	6.2	3.5	1.5								
2015/16	10.8	7.8	4.7	2.0									
2016/17	8.8	5.7	2.6										
2017/18	5.9	3.0											
2018/19	2.8												

Figure I.1: Section 148 Revaluation [22]

Figure 4. CPI Annual Inflation (%)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997	2.1	1.9	1.7	1.6	1.6	1.7	2.0	2.0	1.8	1.9	1.9	1.7
1998	1.5	1.6	1.7	1.8	2.0	1.7	1.4	1.3	1.4	1.4	1.4	1.6
1999	1.6	1.4	1.7	1.5	1.3	1.3	1.3	1.2	1.2	1.1	1.2	1.1
2000	0.8	0.9	0.6	0.6	0.5	0.8	0.9	0.6	1.0	1.0	1.1	0.8
2001	0.9	0.8	0.9	1.2	1.7	1.7	1.4	1.8	1.3	1.2	0.8	1.1
2002	1.6	1.5	1.5	1.4	0.8	0.6	1.1	1.0	1.0	1.4	1.5	1.7
2003	1.3	1.6	1.5	1.4	1.3	1.1	1.3	1.4	1.4	1.4	1.3	1.3
2004	1.4	1.3	1.1	1.1	1.5	1.6	1.4	1.3	1.1	1.2	1.5	1.7
2005	1.6	1.7	1.9	1.9	1.9	2.0	2.3	2.4	2.5	2.3	2.1	1.9
2006	1.9	2.0	1.8	2.0	2.2	2.5	2.4	2.5	2.4	2.4	2.7	3.0
2007	2.7	2.8	3.1	2.8	2.5	2.4	1.9	1.8	1.8	2.1	2.1	2.1
2008	2.2	2.5	2.5	3.0	3.3	3.8	4.4	4.7	5.2	4.5	4.1	3.1
2009	3.0	3.2	2.9	2.3	2.2	1.8	1.8	1.6	1.1	1.5	1.9	2.9
2010	3.5	3.0	3.4	3.7	3.4	3.2	3.1	3.1	3.1	3.2	3.3	3.7
2011	4.0	4.4	4.0	4.5	4.5	4.2	4.4	4.5	5.2	5.0	4.8	4.2
2012	3.6	3.4	3.5	3.0	2.8	2.4	2.6	2.5	2.2	2.7	2.7	2.7
2013	2.7	2.8	2.8	2.4	2.7	2.9	2.8	2.7	2.7	2.2	2.1	2.0
2014	1.9	1.7	1.6	1.8	1.5	1.9	1.6	1.5	1.2	1.3	1.0	0.5
2015	0.3	0.0	0.0	-0.1	0.1	0.0	0.1	0.0	-0.1	-0.1	0.1	0.2
2016	0.3	0.3	0.5	0.3	0.3	0.5	0.6	0.6	1.0	0.9	1.2	1.6
2017	1.8	2.3	2.3	2.7	2.9	2.6	2.6	2.9	3.0	3.0	3.1	3.0
2018	3.0	2.7	2.5	2.4	2.4	2.4	2.5	2.7	2.4	2.4	2.3	2.1
2019	1.8	1.9	1.9	2.1	2.0	2.0	2.1	1.7	1.7	1.5	1.5	

Figure I.2: CPI Annual Inflation (%) [23]



ANNEX 2

At this website - <https://www.gov.uk/government/publications/equalising-pensions-for-the-effect-of-unequal-guaranteed-minimum-pensions/guidance-on-the-use-of-the-guaranteed-minimum-pensions-gmp-conversion-legislation> - it can be found the legislation relatively to the 10 steps process for GMP conversion. It is a document set by the Government of UK, published at 18 April, 2019.

The 10 set process is just an excerpt of the legislation:

4. An outline of the DWP methodology

The 10 stage process outlined below results in the adjustment of an individual's benefits to compensate for post 16 May 1990 GMP inequalities as well as conversion of all of the individual's GMP.

The conversion aspect accords with the current GMP conversion legislation contained in sections 24A–H of the Pension Schemes Act 1993 and regulations 27–27A of the Occupational Pension Schemes (Schemes that were Contracted-out) (No 2) Regulations 2015 (SI 2015/1677).

This process was consulted on by DWP in November 2016 and was broadly welcomed by the pensions industry. Conversion was also held to be a lawful method for equalisation by the Judge in the Lloyds Bank case.

As explained in the response to the November 2016 consultation on a new methodology for equalising pensions for the effect of GMPs, government is considering changes to the GMP conversion legislation to clarify certain issues.

The guidance will be updated from time to time to reflect any changes to legislation that take place in the future and any material developments in case law.

4.1 GMP reconciliation and rectification

It is important that schemes are satisfied that they hold the correct GMP figure before resolving inequalities. Many schemes undertook a GMP reconciliation with HMRC over

recent years so will have that assurance.

The service is now closed but schemes can check the GMP amount HMRC holds using the GMP checker service.

GMP Checker service

This service, which is available through the Pension Scheme Online service, automatically generates member and notional dependant GMP entitlements accrued between 1990 and 1997, and the GMPs that would have been accrued over the same period if the member were of the opposite sex.

Pre and post 1988 member and notional dependant GMPs are also calculated.

Weekly GMP figures are available at any dates between date of leaving (or notional date of leaving) and GMP age. Further information is provided in HMRC's Countdown Bulletin 22.

There is also a slightly different service available through the GMP Checker service to obtain members' contracted out dates and full earnings history.

The timing of any GMP rectification exercise (when benefits are adjusted prospectively and possibly retrospectively following reconciliation of scheme records) might usefully be aligned with that for addressing inequalities created by GMPs, especially if rectification is likely to generate benefit reductions.

The 10 stages of the process for resolving GMP inequalities through GMP conversion are described below.

The trustees may wish to contact all relevant parties, including the scheme administrators, before taking forward the process and setting the date for conversion, to ensure that their plans are achievable and do not create any unmanageable risks.

4.2 Stage 1 - Reach agreement with the employer

Section 24E (2) Pension Schemes Act 1993

The trustees agree with the employer in relation to the scheme that GMP conversion is to be undertaken. This consent extends to the terms on which benefits are to be converted as part of the conversion exercise (see Stage 2 below).

Where the participating employers have changed over the years, legal advice should be taken as to how (or whether) the consent requirement applies.

Employers will likely wish to understand both the conversion basis and the benefits to be converted given the potential impact on pension accounting of any basis mismatch.

4.3 Stage 2 – Select the members for conversion and agree which benefits are to be converted and the form of the new benefits

Selecting the members

The trustees and the employer identify and agree which members will have their benefits "converted".

The members selected could include survivors in receipt of GMP survivors' pensions following the death of a previously contracted out member.

Common features of GMP inequality resolution work are as follows:

-
- there is no requirement to equalise for those who left active service before 17 May 1990 so they could be excluded if the motivation is equalisation only
 - of those with service between 17 May 1990 and 5 April 1997, a significant proportion of members are likely to require no equalisation uplift
 - for many of those who do need an uplift, the actuarial value of the uplift will be very modest, however, there could be some for whom the uplifts are significant

Trustees may wish to take advice in relation to members for whom the estimated cost of calculating and implementing equalisation is the same as or greater than the projected additional benefits to which the member would be entitled as a result of equalisation.

It is not necessary to convert benefits for all members, nor to convert at the same time. The legislation permits schemes to undertake conversion in stages for different groups or individuals if the trustees wish.

Agreeing the benefits to amend as part of the conversion process

A decision regarding which benefits will be amended as part of the conversion process will also be required.

Conversion requires that the trustees remove the GMP rules relating to the selected members, but for pre 1990 service it is not necessary to reshape either the GMP or the excess, as both can remain unequal.

However, conversion could mean that for some members all or a significant proportion of their accrued benefits will be re-shaped as part of the process, not just that relating to their 1990 to 1997 service for which equalisation is required.

For the avoidance of doubt, for a selected member, all of their GMP and the benefit which accrued alongside this GMP need to take part in the conversion process, not just that relating to 17 May 1990 to 5 April 1997 accrual.

GMP conversion may also be extended to those with GMPs who left prior to the Barber judgment, but for them there will be no need to undertake an equalisation step.

The description of the later stages of the process assumes that the benefits to be amended are limited to that part of pensionable service from 6 April 1978 up to 5 April 1997 during which the GMP that is being converted accrued.

We refer in this document to the selected benefits as the “benefits for conversion” or the “post conversion benefits”.

Deciding the form of the post conversion benefits

A decision regarding the form the post-conversion benefits will take will also be required.

There are explicit constraints in legislation regarding the form of post conversion benefits (See sections 24B and 24D of Pension Schemes Act 1993 and regulation 27A of S.I. 2015/1677).

In particular, the post conversion benefits:

- must be actuarially at least equivalent to the pre conversion benefits
- must not include money purchase benefits, apart from those provided under the scheme immediately before the conversion date
- must include survivors' benefits in accordance with the provisions of the Act and Regulations
- for pensions in payment, the amount of pension to which a member had an immediate entitlement before the conversion must not be reduced as a result of the conversion

Survivor benefits Post conversion schemes must currently provide the following on the death of a member (whether before or after attaining normal pension age):

- to a surviving widow – a pension equal to at least half the value of the pension to which the deceased member would have been entitled by reference to employment during the period 6 April 1978 to 5 April 1997
- to a surviving widower or civil partner – a pension equal to at least half the value of the pension to which the deceased member would have been entitled by reference to employment during the period 6 April 1988 to 5 April 1997

The circumstances in which and periods during which the converted scheme must provide the above survivors' benefits are currently set out in regulation 27A of the Occupational Pension Schemes (Schemes that were Contracted-out) (No 2) Regulations 2015 (S.I. 2015/1677).

Trustees will need to ensure that such survivor benefits post conversion are provided on terms at least as generous as this.

Revaluation and indexation

Once conversion has taken place, the GMP rules will not apply to the converted benefits. This includes the revaluation and indexation requirements applicable to GMP benefits.

Other issues

Trustees are required to act in accordance with their fiduciary duties as pensions trustees, including when taking action to convert and equalise benefits and in taking decisions regarding the shape and form of the post conversion benefits within the scope of the conversion legislation.

Trustees will need to take advice on the proposed structure of the new benefits. If the benefits will be materially different in shape and form, the trustees may wish to consider giving the members options and if they do this, they may wish to consider if aspects of the Code of Practice for Incentive Exercises may be relevant.

4.4 Stage 3 – Set the conversion date

Section 24E (2) Pension Schemes Act 1993

The trustees and the employer agree the date at which conversion is to be effected (the “conversion date”).

4.5 Stage 4 – Pre conversion consultation

Section 24E(3)(a) Pension Schemes Act 1993

The trustees then write to the selected members to inform them of the proposed conversion and seek their views.

Consultation should be at a high level stating that:

- they are proposing that:
- GMPs accrued during a specified period of pensionable service will be converted into non-GMP form
- the benefits that accrued alongside these GMPs will also be adjusted
- during the course of this process there will be a resolution of the GMP inequality issue
- although this process may result in changes to benefits, the member will experience no reduction in their overall actuarial value
- that more personalised information will be made available once calculations have been concluded and benefits adjusted
- the details of the person to be contacted if there are any questions, or comments

For the avoidance of doubt, the pre conversion consultation requirement in the conversion legislation is distinct from that required under the Pensions Act 2004 when a “listed change” is proposed by the sponsoring employer.

For deferred members, trustees may (if relevant) need to explain how the process has the potential to reduce the starting amount of some members’ pensions but that the value of the payments over an expected retirement length before and after conversion has been independently assessed to be the same.

Trustees are required to take all reasonable steps to consult members. When seeking to contact a member the usual steps a trustee would take when required to provide information to that member under the Occupational and Personal Pension Schemes (Disclosure of Information) Regulations 2013 (S.I. 2013/2734) are likely to be sufficient.

4.6 Stage 5 – Valuation

Section 24B (2) Pension Schemes Act 1993 and regulation 27 S.I. 2015/1677

The trustees instruct the scheme actuary to value for each selected member:

- the member’s benefits to be converted (along with attaching survivor benefits) – typically those in respect of that part of pensionable service up to 5 April 1997

(“amount A”) during which the GMP that is being converted accrued. Amount A is effectively the pre conversion, pre GMP equalisation value of these pre 1997 benefits.

- the member’s benefits (along with attaching survivor benefits) in respect of the same part of pensionable service (so typically up to 5 April 1997 during which the GMP that is being converted accrued), but assuming that for the period from 17 May 1990 to 5 April 1997 the GMP entitlement had been calculated as if they were of the opposite sex, with the excess over GMP being adjusted accordingly. This is “amount B”.

Both amounts A and B will be calculated as at the conversion date.

It will be necessary to value and compare the whole (non money purchase) benefit accrued in the selected period, not just the GMP, because members with a higher GMP will have a lower excess over GMP.

Depending on the benefit structure of the scheme (in particular rights to indexation and survivors’ benefits on the excess over GMP) a £1 of excess may be more or less valuable than a £1 of GMP.

For example, if the excess over GMP increases at 5% per year fixed, if the member has a higher GMP than their comparator, they may still need to have an inequality adjustment.

4.7 Basis to use

The valuation of amount A and amount B should be carried out on the same basis.

The trustees are responsible for determining the actuarial equivalence of the pre and post conversion benefits. In doing so, they must arrange for the scheme actuary to calculate the actuarial values of the pre and post conversion benefits.

The legislation does not specify what assumptions should be chosen.

However, the trustees are required to obtain and consider advice from the scheme actuary in deciding what assumptions are appropriate.

Trustees need to be aware that the choice of approach may substantially affect some members’ benefits, in particular where benefits increase at different rates pre and post conversion.

The trustees can, where they think it necessary, change their decisions as to what assumptions should be used.

In such a situation it is advisable that they take actuarial advice.

They may also wish to consider whether to discuss any changes with the employer. It will often be acceptable to use the scheme’s Cash Equivalent Transfer Value (CETV) basis or unisex equivalent as a starting point for a basis to calculate the value of the benefits, provided that no reduction based on the level of scheme funding is made.

Careful consideration should be given to any assumptions which are not unisex.

If unisex actuarial assumptions are used (even if the scheme is not using such an approach for its CETV basis) this will have the effect of ensuring that the individual’s

converted benefits that relate to the 17 May 1990 to 5 April 1997 window period are identical to those of their notional opposite sex comparator.

If the CETV basis is to be used as a starting point for setting the conversion basis, it may well be necessary for the trustees to review the existing basis having taken actuarial advice to ensure that it is appropriate, given that such a basis might have been set having regard to those most likely to transfer, rather than all members with GMPs (which will include pensioners).

If so, this review would most likely be undertaken earlier in the process, such as at Stage 1.

If active members are to be converted the trustees will need to decide whether to have their benefits valued as either continuing in service, immediately leaving (at the conversion date), or a more complex calculation involving a scale of assumed probabilities of withdrawal at different ages.

It will also be necessary to decide what retirement date to assume, as again this can have a material impact.

For these purposes the trustees may wish to seek actuarial advice. The trustees may choose not to convert such members until they are no longer in pensionable service (similar issues arise for those no longer in pensionable service but who retain a salary link until such time as they cease to be in employment to which the scheme relates).

4.8 Stage 6 – Equalisation

Adjusting for the effects of unequal GMPs (so called “equalisation”) would be achieved as part and parcel of conversion by using a conversion value for each selected member which is the higher of amount A and amount B, in other words, the more valuable of the male or female benefit structure, thus encompassing the different male/female GMP entitlements.

4.9 Stage 7 – Conversion – determining the post conversion benefit

Section 24B (2)-(5) Pension Schemes Act 1993 and regulations 27 and 27A S.I. 2015/1677

Having determined the conversion value for the selected member in accordance with Stage 6, it is then necessary to turn it back into a revised pension benefit.

A consistent approach to the Stage 5 valuation should be used, so employing the scheme’s CETV basis, if this was used at Stage 5.

4.10 Stage 8 – Certification

Regulation 27(5) and (6) S.I. 2015/1677

The actuary will certify that the calculations have been completed and that the post conversion benefits are actuarially at least equivalent to the pre conversion benefits as equalised for the effect of GMPs.

This certificate, which should be in respect of all those covered in a specific exercise, must be sent to the trustees no later than 3 months after the calculations have been completed.

4.11 Stage 9 – Modification of scheme to effect conversion

Section 24G Pension Schemes Act 1993

The trustees may resolve to effect the conversion on the agreed basis.

Alternatively, they may use the scheme's amendment power to enable GMP conversion, in which case Sections 67 to 67I of the Pensions Act 1995 are disapplied, in addition to which they may include amendments they think are necessary or desirable as a consequence of, or to facilitate, conversion.

4.12 Stage 10 – Post conversion notifications

Sections 24E(3)(b) and 24E (4) Pension Schemes Act 1993

The trustees must take all reasonable steps to notify the members and survivors (in the latter case, those with an immediate entitlement to benefits) whose benefits have been converted either in advance or as soon as reasonably practicable after the conversion date.

This notification should say that the benefits have been (or, will be if the conversion has not yet taken place) converted as at the conversion date.

They should be told what this means in terms of the amount and the shape of the benefit going forward. The date on which any benefits in payment will change (or have changed) should be included in the notice.

Again, when seeking to contact a member, the usual steps a trustee would take when required to provide information to that member under the Occupational and Personal Pension Schemes (Disclosure of Information) Regulations 2013 are likely to be sufficient.

Currently HMRC also needs to be notified on or before the conversion date that the individual's GMPs have been or will be converted.