



The Galbraith Tables

Actuarial tables for use when valuing pension rights for offsetting purposes with reference to non-pension capital assets

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A FOREWORD TO VERSION 1.0 BY THE AUTHORS

The resolution of matters pertaining to finance for a divorcing couple is a complex affair, and this becomes especially true where pensions are to be considered. The myriad forms of pensions that exist within the UK means that any attempt to value such rights as might be held by a divorcing couple in a manner that is internally consistent is no mean task, and it is in performing analysis of this nature to which we have devoted our careers in the last few years.

Despite the introduction of pension sharing on divorce in December 2000, it remains the case that many such divorces which take place in the courts are settled with reference to offsetting i.e. the equating of pension rights with certain amounts of non-pension capital. This introduces further complexity, not least as such non-pension assets are seldom directly comparable with the rights that either individual might hold in a pension scheme.

Again and again, we have sought to perform such calculations as may prove useful to individuals, their legal representatives and indeed the courts, and it is in this spirit that we produce this first edition of these Galbraith Tables. These tables are intended to be used in a straightforward manner to place a value on pension rights that may be payable to either party, in turn to allow the parties to begin what remains a complex process of equating pension and non-pension rights.

We have been inspired by the simplicity of both the Duxbury and Ogden tables, being actuarial resources produced to help the courts place a capital value upon various streams of payments. These tables also follow the “*Multiplicand × Multiplier*” approach, and the commentary that accompanies these tables provides a detailed explanation of how the appropriate multiplicands are to be derived.

Indeed, Appendix U of *A Guide to the Treatment of Pensions of Divorce*—colloquially known in this industry as the PAG Report—sets out the challenge to produce such tables as may be used for “Ogden-style tables” in respect of valuing pension rights for offsetting purposes. While we accept that a range of possible suitable answers may emerge in respect of offsetting of pension rights—with there being both actuarial and legal considerations involved—we are nonetheless delighted to have taken up this challenge to create a resource that we believe to be of great ongoing value to practitioners in this field.

We are indebted to our fellow expert witness report writers at Mathieson Consulting Limited—being Catherine Anderson, Rob Pritchard and Rahim Rashid—for their helpful contributions, insights and proof-reading skills in the production of the tables and this accompanying document. Special thanks and praise are also due to Jonathan Blatchford, also an expert witness report writer at Mathieson Consulting Limited, for his thorough and diligent review of the tables and the calculations that underpin these. We would also like to thank George Mathieson for his support and enthusiasm in the execution of this endeavour, along with his insights into how best we might seek to take it to market. Finally, thanks are also due to Rhys Taylor of 36 Family for his legal eye, thoughtful input and his understanding of the needs of practitioners that lie beyond the ken of we actuaries.



Jonathan Galbraith



Chris Goodwin

March 2022

A FOREWORD TO VERSION 2.0 BY THE AUTHORS

Some two years have now passed since the publication of Version 1.0 of the Galbraith Tables, which gave rise to our decision to revisit these in light of market movements. From the beginning, we always took the view that the tables would be subject to occasional such review, rather than this being a monthly or quarterly endeavour. However, we are now of the opinion that there has been something of a “paradigm shift” in financial markets which we seek to reflect as best as is possible in this revised edition.

In particular, the impact of quantitative easing (“money printing”) in light of the COVID 19 pandemic has made itself felt in the form of higher levels of price inflation, and in turn interest rates have risen in an attempt to control this. Overall, the time value of money is now deemed to be much greater than it was even just a couple of years ago, and we seek to allow for this in these revised Galbraith Tables.

The impact of higher-than-hitherto expected investment returns has the effect of reducing the capital value of a pension promise, as less money need be set aside today to meet a promise in the future. This applies both to the accumulation phase (pre-retirement) and the subsequent decumulation or drawdown phase (post-retirement). The effect thereof is to reduce the Galbraith Tables factors across the board, which is in keeping with reductions seen both in pension valuations and in the annuity costs faced by holders of defined contribution funds.

It is noted that in the two-year period since the launch of Version 1.0 of the Galbraith Tables, we have seen these published first in the inaugural edition of the Financial Remedies Journal and in *At A Glance 2023–2024*, as published by Class Legal on behalf of the Family Law Bar Association. We are indebted to the editors and publishers of these documents for their keenness to include the tables within, and would in particular like to thank Joseph Rainer, barrister at QEB and a co-editor of *At A Glance*, for his support and enthusiasm.

Moreover, the Pensions Advisory Group (PAG) was reconvened to produce an updated report, with “PAG2” being published in early 2024. The original PAG Report “threw down the gauntlet” for tables of this nature to be produced, as was noted in the foreword to Version 1.0. The revised PAG2 report acknowledges the existence of such tables, and notes that there is a place for these in the valuation of pension rights on divorce for offsetting purposes, alongside other competing methods. We likewise welcome this acceptance of the tables.

We should again like to thank our colleague Jonathan Blatchford, an experienced expert witness report writer at Mathieson Consulting Limited, for his further diligence in reviewing these revised tables and associated commentary.

It is hoped that these updated tables will continue to serve family law practitioners in the capacity of allowing them to place a broad value upon the pension rights that individuals participating in a divorce may hold.



Jonathan Galbraith



Chris Goodwin

April 2024

A QUICK START GUIDE TO USING THE GALBRAITH TABLES

This document sets out in some detail the remedy of offsetting as applied to pension rights, how the Galbraith Tables have been constructed and the assumptions that underpin these, and it provides full details (including examples) of how the tables themselves may be used.

However, it was felt that the reader may appreciate some kind of “quick start guide” i.e. a simple explanation of how to use the tables in the first instance, in the understanding that the finer details may be considered thereafter. This may be taken as such a guide, but it remains important for the user to understand the assumptions made and the caveats associated with the Galbraith Tables. No liability is admitted by the authors in respect of what follows in this document.

To value a lump sum amount of £10,000 (in today’s money terms) payable to someone retiring at age 65 who is today aged 40

1. Refer to “*Factors used for the valuation of lump sums payable at retirement (either sex)*” in Section B of this document.
2. Look up the factor for **Age at date of calculation = 40** and **Assumed retirement age = 65**, which gives 0.430.
3. Multiply the lump sum being valued (the **multiplicand**) by the Galbraith Table factor (the **multiplier**) i.e. $10,000 \times 0.430 = £4,300$.
4. This means that we determine **£4,300** to be required today to provide this individual with £10,000 in today’s money terms when he/she is aged 65, in 25 years’ time.
5. Adjustments in respect of tax and/or utility may then be appropriate, as discussed in Section G of this document.

To value an index-linked pension amount of £1,000 (in today’s money terms) that is payable to a man retiring at age 60 who is today aged 45

1. Refer to “*Factors used for the valuation of pensions payable in retirement (males)*” in Section B of this document.
2. Look up the factor for **Age at date of calculation = 45** and **Assumed retirement age = 60**, which gives 14.330.
3. Multiply the *per annum* pension being valued (the **multiplicand**) by the Galbraith Table factor (the **multiplier**) i.e. $1,000 \times 14.330 = £14,330$.
4. This means that we determine **£14,330** to be required today to provide this individual with an index-linked £1,000 pa pension income, in today’s money terms, from age 60—being in 15 years’ time—for the rest of his life.
5. Adjustments in respect of tax and/or utility may then be appropriate, as discussed in Section G of this document.

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SECTION A PURPOSE OF THIS DOCUMENT

An introduction to the Galbraith Tables

- A.1. This document sets out details of Version 2.0 of the Galbraith Tables, being the proprietary tables of factors for use when offsetting pension benefits upon divorce using amounts of non-pension capital, as produced by Mathieson Consulting Limited.
- A.2. The tables themselves are to be found in Section B, with details of the assumptions that underpin them in Section D. Details of how the tables are to be used with actual pensions data may be found in Section E, with some discussion of matters pertaining to tax / utility adjustments being given in Section G.
- A.3. These tables may therefore prove useful to practitioners—be these legal or financial in nature—or indeed to individuals themselves when looking to value pension rights for offsetting purposes upon divorce.
- A.4. However, it is important to understand that **these tables are by no means intended to provide a single, definitive value of pension rights that may be used for offsetting purposes**. Indeed, most experts in this field will conclude that no such single figure is likely to exist in respect of “*the value of £X pa of pension in retirement*”, and it would be foolish and misleading to pretend otherwise.
- A.5. Instead, these tables must be seen as providing “*an answer*” rather than “*the answer*” in respect of any such question, and as alluded to above, the tables are a function of the assumptions that we have made in their compilation. There will exist other assumptions that are equally valid, and there will be circumstances where different assumptions / approaches will yield a more appropriate result. Any use of these tables must be made in this understanding.
- A.6. **This Version 2.0 of the Galbraith Tables is deemed to supersede the earlier Version 1.0, which is now in effect withdrawn by the authors.**

Caveats in respect of the Galbraith Tables

- A.7. Neither the authors of this document nor Mathieson Consulting Limited can accept any liability where the use of these tables gives rise to offsetting figures that are then deemed to be unsuitable in a pensions settlement.
- A.8. No liability is admitted in respect of—but not restricted to—such matters as:
- user error through the application of the Tables;
 - user error in respect of a misunderstanding of the nature of the pension rights being valued;
 - any numerical errors within the Tables themselves such as may exist;
 - the Tables’ underlying assumptions being deemed unsuitable to a particular set of circumstances;
 - the investment strategy that an individual who receives offset capital may wish to adopt; nor
 - the appropriate adjustments to be made in respect of tax and/or utility.
- A.9. Instead, it must be understood that what emerges through the use of such tables is intended to be indicative and for discussion purposes by the parties in seeking to reach a settlement. Further analysis may be required to place any such results as emerge from the Tables into a broader context.
- A.10. It is noted that the UK pensions regime is complex and all too readily misunderstood, both by individual beneficiaries and very often their advisers. **Nothing shown herein is intended to be a substitute for the commissioning of proper independent advice—in the form of an expert witness report—to parties upon their divorce and financial remedy procedures.**

A.11. Part 6 of *A Guide to the Treatment of Pensions on Divorce*¹, being the report of the Pension Advisory Group (PAG)²—as published in July 2019 by the Nuffield Foundation and revised in 2024—seeks to answer the question *“When might it be necessary to instruct a Pensions on Divorce Expert (PODE)?”*.

Professional compliance

A.12. The factors that comprise the Galbraith Tables shown in this document have been calculated in accordance with the applicable Technical Actuarial Standard, being TAS 100 as issued by the Financial Reporting Council (FRC).

About MCL

A.13. Mathieson Consulting Limited (MCL) is an actuarial consulting firm that specialises in producing Pensions on Divorce Expert Witness reports for the courts, taking in such matters as offsetting as well as other remedies e.g. pension sharing.

A.14. The Firm is able to provide assistance to solicitors representing individuals who are going through a divorce and have pensions issues to settle, and it has produced well in excess of 7,000 such reports since being founded in 2007.

A.15. At the time of writing, MCL employs four actuaries and various other individuals experienced in both PODE work and pensions administration, and the Firm is in a position to provide support upon such matters as:

- The production of an expert witness report to consider pension sharing / offsetting; and
- The production of a simplified “offsetting only” report that makes use of the Galbraith Tables.

A.16. This work is typically performed on a single joint expert basis; however, the Firm is also able to act on a sole instruction basis with reference to such matters as shadowing the reports of other experts, providing advice on the composition of Letters of Instruction to be sent to other experts and such like.

A.17. Contact details for MCL are to be found at www.mcact.co.uk.

¹ The revised version is to be found at <https://www.nuffieldfoundation.org/wp-content/uploads/2023/A-guide-to-the-treatment-of-pensions-on-divorce-2nd-edition.pdf>.

² The PAG is a multi-disciplinary body including leading actuarial, legal, judicial, academic and other experts in the field of Pensions and Divorce. The establishment of this Group was sanctioned by the President of the Family Division, and is jointly chaired by Mr Justice Francis and HHJ Edward Hess. Its purpose is to provide an authoritative guide to the Courts, lawyers, and others, as to the correct treatment of pensions in divorce cases.

SECTION B THE GALBRAITH TABLES

Factors used for the valuation of lump sums payable at retirement (either sex)

Retirement ages 50–69

Age at date of calculation	Assumed retirement age																			
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
20	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230	0.222	0.214	0.206	0.199	0.192	0.185	0.178
21	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230	0.222	0.214	0.206	0.199	0.192	0.185
22	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230	0.222	0.214	0.206	0.199	0.192
23	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230	0.222	0.214	0.206	0.199
24	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230	0.222	0.214	0.206
25	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230	0.222	0.214
26	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230	0.222
27	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239	0.230
28	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248	0.239
29	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257	0.248
30	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267	0.257
31	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277	0.267
32	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287	0.277
33	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298	0.287
34	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309	0.298
35	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320	0.309
36	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332	0.320
37	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345	0.332
38	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358	0.345
39	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371	0.358
40	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385	0.371
41	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399	0.385
42	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414	0.399
43	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430	0.414
44	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446	0.430
45	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462	0.446
46	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480	0.462
47	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497	0.480
48	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516	0.497
49	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535	0.516
50	1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555	0.535
51		1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576	0.555
52			1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598	0.576
53				1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620	0.598
54					1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643	0.620
55						1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667	0.643
56							1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692	0.667
57								1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718	0.692
58									1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745	0.718
59										1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772	0.745
60											1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799	0.772
61												1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827	0.799
62													1.000	0.999	0.975	0.948	0.918	0.886	0.856	0.827
63														1.000	0.999	0.975	0.948	0.918	0.886	0.856
64															1.000	0.999	0.975	0.948	0.918	0.886
65																1.000	0.999	0.975	0.948	0.918
66																	1.000	0.999	0.975	0.948
67																		1.000	0.999	0.975
68																			1.000	0.999
69																				1.000
70																				
71																				
72																				
73																				
74																				
75																				
76																				
77																				
78																				
79																				
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84																				
85																				
86																				
87																				
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Factors used for the valuation of pensions payable in retirement (males)

Retirement ages 50–69

Age at date of calculation	Assumed retirement age																			
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
20	10.777	10.209	9.667	9.148	8.653	8.179	7.727	7.295	6.883	6.489	6.113	5.754	5.411	5.085	4.773	4.477	4.195	3.926	3.671	3.428
21	11.157	10.569	10.007	9.469	8.956	8.465	7.997	7.549	7.122	6.714	6.324	5.952	5.598	5.259	4.937	4.630	4.338	4.060	3.795	3.544
22	11.551	10.941	10.358	9.802	9.269	8.761	8.276	7.812	7.369	6.946	6.543	6.158	5.790	5.440	5.106	4.789	4.486	4.198	3.924	3.664
23	11.959	11.327	10.723	10.146	9.594	9.067	8.564	8.084	7.625	7.187	6.769	6.370	5.990	5.627	5.281	4.952	4.639	4.341	4.057	3.787
24	12.381	11.726	11.100	10.502	9.930	9.384	8.863	8.365	7.889	7.436	7.003	6.590	6.196	5.820	5.462	5.121	4.797	4.488	4.194	3.915
25	12.819	12.140	11.491	10.871	10.278	9.712	9.172	8.656	8.163	7.693	7.245	6.817	6.409	6.020	5.649	5.296	4.960	4.640	4.336	4.048
26	13.272	12.568	11.895	11.252	10.638	10.052	9.492	8.957	8.447	7.960	7.495	7.051	6.629	6.226	5.842	5.477	5.129	4.798	4.483	4.184
27	13.741	13.011	12.314	11.648	11.011	10.403	9.823	9.269	8.740	8.235	7.754	7.294	6.856	6.439	6.042	5.663	5.303	4.960	4.635	4.325
28	14.227	13.471	12.748	12.057	11.398	10.767	10.166	9.592	9.043	8.520	8.021	7.546	7.092	6.660	6.248	5.856	5.483	5.128	4.791	4.471
29	14.731	13.946	13.197	12.481	11.797	11.144	10.521	9.926	9.358	8.816	8.299	7.806	7.336	6.888	6.461	6.055	5.669	5.302	4.953	4.621
30	15.252	14.439	13.662	12.920	12.212	11.535	10.888	10.271	9.683	9.121	8.585	8.074	7.588	7.124	6.682	6.262	5.862	5.481	5.120	4.777
31	15.792	14.950	14.144	13.375	12.640	11.939	11.269	10.630	10.019	9.437	8.882	8.353	7.848	7.368	6.910	6.475	6.060	5.661	5.292	4.937
32	16.352	15.478	14.643	13.846	13.084	12.357	11.663	11.000	10.368	9.765	9.189	8.641	8.118	7.620	7.146	6.695	6.266	5.858	5.471	5.103
33	16.931	16.026	15.160	14.334	13.544	12.790	12.071	11.384	10.729	10.103	9.507	8.939	8.397	7.881	7.390	6.923	6.478	6.056	5.655	5.274
34	17.532	16.593	15.696	14.839	14.021	13.239	12.493	11.781	11.102	10.454	9.836	9.247	8.686	8.151	7.642	7.158	6.698	6.261	5.845	5.451
35	18.153	17.180	16.250	15.362	14.514	13.704	12.931	12.193	11.489	10.817	10.177	9.566	8.985	8.431	7.904	7.402	6.925	6.472	6.042	5.634
36	18.798	17.789	16.825	15.904	15.025	14.185	13.384	12.619	11.889	11.193	10.530	9.897	9.294	8.720	8.174	7.654	7.161	6.691	6.246	5.823
37	19.465	18.419	17.420	16.466	15.554	14.684	13.853	13.060	12.304	11.583	10.895	10.239	9.614	9.020	8.454	7.915	7.404	6.918	6.456	6.018
38	20.157	19.073	18.037	17.047	16.102	15.200	14.339	13.517	12.733	11.986	11.273	10.593	9.946	9.330	8.743	8.185	7.655	7.152	6.674	6.220
39	20.874	19.750	18.676	17.650	16.670	15.735	14.843	13.991	13.178	12.403	11.664	10.960	10.289	9.650	9.043	8.465	7.916	7.394	6.899	6.429
40	21.617	20.452	19.338	18.275	17.259	16.290	15.364	14.481	13.639	12.836	12.070	11.340	10.644	9.983	9.353	8.754	8.185	7.645	7.132	6.645
41	22.364	21.180	20.025	18.922	17.869	16.864	15.905	14.990	14.117	13.284	12.490	11.733	11.013	10.327	9.674	9.053	8.464	7.904	7.373	6.868
42	23.114	21.911	20.737	19.594	18.502	17.460	16.466	15.517	14.612	13.748	12.925	12.141	11.394	10.683	10.007	9.364	8.753	8.172	7.622	7.100
43	23.889	22.644	21.453	20.290	19.158	18.078	17.047	16.063	15.125	14.230	13.377	12.564	11.789	11.052	10.351	9.685	9.052	8.450	7.880	7.339
44	24.692	23.404	22.171	20.990	19.839	18.719	17.650	16.630	15.657	14.729	13.845	13.002	12.199	11.435	10.708	10.018	9.361	8.738	8.147	7.587
45	25.523	24.190	22.914	21.692	20.523	19.383	18.275	17.217	16.209	15.247	14.330	13.456	12.624	11.832	11.079	10.363	9.683	9.037	8.424	7.843
46	26.383	25.004	23.683	22.419	21.209	20.051	18.923	17.827	16.781	15.784	14.833	13.927	13.065	12.243	11.463	10.720	10.015	9.346	8.711	8.109
47	27.216	25.846	24.480	23.171	21.919	20.721	19.575	18.459	17.375	16.341	15.355	14.416	13.521	12.670	11.861	11.091	10.361	9.667	9.009	8.385
48	27.962	26.662	25.303	23.950	22.655	21.415	20.229	19.094	17.990	16.918	15.896	14.923	13.995	13.113	12.274	11.476	10.719	10.000	9.318	8.671
49	28.606	27.391	26.102	24.756	23.415	22.133	20.905	19.731	18.609	17.517	16.458	15.448	14.487	13.572	12.702	11.875	11.090	10.345	9.638	8.968
50	28.597	28.022	26.815	25.536	24.202	22.875	21.605	20.391	19.229	18.119	17.040	15.993	14.996	14.048	13.146	12.289	11.475	10.702	9.969	9.275
51		28.012	27.432	26.233	24.964	23.643	22.329	21.072	19.871	18.722	17.624	16.558	15.524	14.541	13.606	12.717	11.874	11.073	10.313	9.593
52			27.421	26.835	25.644	24.386	23.078	21.777	20.534	19.345	18.209	17.124	16.071	15.052	14.083	13.162	12.287	11.457	10.670	9.923
53				26.823	26.232	25.049	23.802	22.506	21.220	19.990	18.815	17.692	16.620	15.581	14.576	13.622	12.715	11.854	11.038	10.265
54					26.218	25.622	24.448	23.211	21.929	20.656	19.440	18.279	17.170	16.112	15.088	14.098	13.158	12.266	11.420	10.619
55						25.607	25.005	23.840	22.614	21.345	20.087	18.885	17.738	16.644	15.600	14.591	13.617	12.692	11.816	10.985
56							24.989	24.381	23.224	22.010	20.755	19.512	18.325	17.193	16.113	15.085	14.091	13.133	12.224	11.364
57								24.363	23.750	22.602	21.400	20.158	18.931	17.759	16.643	15.579	14.567	13.589	12.647	11.755
58									23.731	23.112	21.974	20.783	19.556	18.345	17.190	16.090	15.042	14.046	13.085	12.160
59										23.091	22.467	21.339	20.160	18.949	17.755	16.617	15.533	14.502	13.523	12.579
60											22.446	21.816	20.698	19.533	18.338	17.161	16.040	14.974	13.961	12.998
61												21.793	21.159	20.052	18.901	17.723	16.564	15.461	14.413	13.417
62													21.135	20.497	19.401	18.265	17.104	15.964	14.880	13.850
63														20.472	19.830	18.747	17.626	16.484	15.363	14.298
64															19.805	19.160	18.090	16.985	15.861	14.760
65																19.134	18.487	17.431	16.342	15.238
66																	18.460	17.812	16.769	15.698
67																		17.784	17.135	16.107
68																			17.106	16.456
69																				16.427
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Factors used for the valuation of pensions payable in retirement (females)

Retirement ages 50–69

Age at date of calculation	Assumed retirement age																			
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
20	11.251	10.667	10.108	9.574	9.063	8.574	8.107	7.660	7.233	6.825	6.435	6.063	5.707	5.368	5.044	4.735	4.440	4.159	3.891	3.636
21	11.654	11.049	10.470	9.916	9.387	8.880	8.396	7.933	7.490	7.068	6.664	6.278	5.909	5.557	5.222	4.901	4.596	4.305	4.027	3.763
22	12.073	11.445	10.845	10.271	9.722	9.197	8.695	8.215	7.757	7.319	6.900	6.500	6.118	5.754	5.406	5.074	4.757	4.456	4.168	3.894
23	12.506	11.855	11.233	10.638	10.069	9.525	9.005	8.508	8.032	7.578	7.144	6.730	6.334	5.957	5.596	5.252	4.924	4.612	4.314	4.030
24	12.954	12.280	11.635	11.019	10.429	9.865	9.326	8.810	8.318	7.847	7.398	6.968	6.558	6.167	5.793	5.437	5.097	4.773	4.465	4.171
25	13.419	12.720	12.052	11.412	10.801	10.217	9.658	9.124	8.613	8.126	7.660	7.215	6.790	6.384	5.997	5.628	5.276	4.940	4.621	4.316
26	13.900	13.176	12.483	11.820	11.187	10.581	10.002	9.448	8.919	8.414	7.931	7.470	7.030	6.609	6.208	5.826	5.461	5.113	4.782	4.467
27	14.399	13.648	12.930	12.243	11.586	10.958	10.358	9.784	9.236	8.712	8.212	7.734	7.278	6.842	6.427	6.030	5.652	5.292	4.949	4.622
28	14.915	14.137	13.392	12.680	12.000	11.349	10.727	10.132	9.564	9.021	8.503	8.007	7.534	7.083	6.653	6.242	5.850	5.477	5.122	4.783
29	15.450	14.643	13.871	13.133	12.428	11.753	11.109	10.492	9.903	9.341	8.803	8.290	7.800	7.333	6.886	6.461	6.055	5.669	5.300	4.950
30	16.004	15.168	14.368	13.603	12.871	12.172	11.504	10.865	10.255	9.672	9.115	8.583	8.075	7.591	7.129	6.688	6.267	5.867	5.485	5.122
31	16.578	15.711	14.882	14.089	13.331	12.606	11.913	11.251	10.619	10.015	9.438	8.886	8.360	7.858	7.379	6.922	6.487	6.072	5.676	5.300
32	17.172	16.273	15.414	14.592	13.806	13.055	12.337	11.651	10.996	10.370	9.771	9.200	8.655	8.135	7.638	7.165	6.714	6.284	5.874	5.484
33	17.788	16.856	15.965	15.113	14.299	13.520	12.776	12.065	11.386	10.737	10.117	9.525	8.960	8.421	7.907	7.416	6.948	6.503	6.079	5.675
34	18.426	17.460	16.536	15.653	14.809	14.002	13.231	12.494	11.790	11.117	10.475	9.862	9.276	8.717	8.184	7.676	7.192	6.730	6.290	5.872
35	19.086	18.085	17.128	16.213	15.338	14.501	13.702	12.938	12.208	11.511	10.845	10.210	9.603	9.024	8.472	7.945	7.443	6.965	6.509	6.076
36	19.771	18.733	17.741	16.792	15.885	15.018	14.189	13.397	12.641	11.919	11.229	10.570	9.941	9.341	8.769	8.223	7.703	7.208	6.736	6.287
37	20.480	19.404	18.375	17.392	16.452	15.553	14.694	13.873	13.090	12.341	11.626	10.943	10.292	9.670	9.077	8.511	7.972	7.459	6.970	6.505
38	21.214	20.099	19.033	18.013	17.039	16.107	15.217	14.366	13.554	12.778	12.037	11.329	10.654	10.010	9.395	8.809	8.251	7.719	7.213	6.731
39	21.975	20.819	19.714	18.657	17.647	16.681	15.758	14.877	14.035	13.230	12.462	11.729	11.029	10.362	9.725	9.118	8.539	7.988	7.464	6.964
40	22.764	21.565	20.419	19.324	18.276	17.276	16.319	15.405	14.533	13.699	12.903	12.143	11.418	10.726	10.066	9.437	8.838	8.267	7.723	7.206
41	23.555	22.338	21.150	20.014	18.929	17.891	16.900	15.953	15.048	14.184	13.359	12.572	11.820	11.103	10.419	9.768	9.146	8.555	7.992	7.456
42	24.349	23.114	21.907	20.730	19.605	18.529	17.502	16.520	15.582	14.687	13.832	13.016	12.237	11.494	10.785	10.110	9.466	8.853	8.269	7.714
43	25.169	23.892	22.668	21.471	20.305	19.190	18.125	17.107	16.135	15.207	14.321	13.475	12.668	11.898	11.164	10.464	9.797	9.162	8.557	7.982
44	26.017	24.696	23.430	22.216	21.030	19.875	18.771	17.716	16.708	15.746	14.828	13.951	13.114	12.316	11.555	10.830	10.139	9.481	8.854	8.258
45	26.894	25.527	24.217	22.961	21.758	20.584	19.439	18.346	17.302	16.305	15.353	14.444	13.577	12.750	11.961	11.209	10.493	9.811	9.162	8.545
46	27.800	26.386	25.031	23.732	22.488	21.295	20.132	18.998	17.916	16.883	15.896	14.954	14.055	13.198	12.381	11.602	10.860	10.153	9.481	8.841
47	28.677	27.274	25.872	24.529	23.242	22.008	20.827	19.674	18.552	17.481	16.459	15.482	14.551	13.663	12.816	12.008	11.239	10.507	9.810	9.148
48	29.461	28.133	26.742	25.352	24.021	22.745	21.523	20.353	19.211	18.101	17.041	16.029	15.064	14.143	13.266	12.429	11.632	10.874	10.151	9.465
49	30.138	28.901	27.583	26.203	24.826	23.506	22.242	21.032	19.873	18.743	17.644	16.596	15.595	14.641	13.732	12.865	12.039	11.253	10.504	9.793
50	30.128	29.564	28.334	27.025	25.657	24.293	22.985	21.733	20.535	19.387	18.269	17.182	16.145	15.156	14.214	13.315	12.460	11.645	10.870	10.132
51		29.552	28.983	27.760	26.461	25.105	23.753	22.458	21.218	20.031	18.895	17.789	16.715	15.690	14.713	13.782	12.895	12.051	11.248	10.484
52			28.970	28.395	27.179	25.891	24.546	23.207	21.925	20.697	19.522	18.398	17.304	16.242	15.229	14.264	13.346	12.471	11.639	10.847
53				28.380	27.799	26.591	25.313	23.980	22.654	21.385	20.170	19.007	17.894	16.813	15.764	14.764	13.812	12.905	12.043	11.223
54					27.784	27.196	25.996	24.728	23.407	22.095	20.838	19.636	18.485	17.385	16.317	15.281	14.294	13.355	12.461	11.612
55						27.179	26.586	25.394	24.135	22.828	21.529	20.285	19.096	17.958	16.871	15.816	14.793	13.820	12.894	12.014
56							26.568	25.968	24.784	23.536	22.241	20.956	19.726	18.550	17.426	16.351	15.310	14.301	13.342	12.430
57								25.949	25.343	24.167	22.930	21.648	20.376	19.160	17.998	16.887	15.827	14.799	13.805	12.860
58									25.323	24.711	23.543	22.317	21.048	19.791	18.589	17.441	16.344	15.298	14.284	13.305
59										24.690	24.071	22.912	21.697	20.442	19.199	18.012	16.878	15.796	14.764	13.766
60											24.049	23.424	22.274	21.070	19.829	18.602	17.430	16.311	15.244	14.227
61												23.401	22.770	21.629	20.437	19.211	17.999	16.843	15.740	14.688
62													22.747	22.110	20.978	19.799	18.587	17.392	16.252	15.165
63														22.086	21.443	20.321	19.154	17.958	16.780	15.656
64															21.418	20.770	19.659	18.505	17.325	16.164
65																20.745	20.092	18.991	17.851	16.688
66																	20.065	19.408	18.318	17.193
67																		19.381	18.718	17.641
68																			18.691	18.025
69																				17.996
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Retirement ages 70–88

Age at date of calculation	Assumed retirement age																		
	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
20	3.393	3.162	2.942	2.733	2.535	2.347	2.169	2.000	1.841	1.690	1.548	1.415	1.289	1.170	1.059	0.955	0.857	0.767	0.683
21	3.511	3.272	3.044	2.828	2.623	2.428	2.243	2.069	1.904	1.748	1.601	1.462	1.332	1.209	1.094	0.986	0.885	0.792	0.706
22	3.633	3.385	3.150	2.926	2.713	2.511	2.320	2.140	1.969	1.807	1.655	1.512	1.377	1.250	1.131	1.019	0.915	0.818	0.729
23	3.760	3.503	3.259	3.027	2.807	2.598	2.400	2.213	2.036	1.869	1.711	1.563	1.423	1.292	1.169	1.053	0.945	0.845	0.753
24	3.891	3.625	3.372	3.131	2.903	2.687	2.482	2.288	2.105	1.932	1.769	1.616	1.471	1.335	1.208	1.088	0.977	0.873	0.778
25	4.026	3.751	3.489	3.240	3.003	2.779	2.567	2.367	2.177	1.998	1.829	1.670	1.520	1.380	1.248	1.125	1.009	0.902	0.804
26	4.166	3.881	3.609	3.351	3.107	2.875	2.655	2.447	2.251	2.066	1.891	1.726	1.572	1.426	1.290	1.162	1.043	0.932	0.830
27	4.311	4.015	3.734	3.467	3.214	2.974	2.746	2.531	2.328	2.136	1.955	1.784	1.624	1.474	1.333	1.201	1.077	0.963	0.857
28	4.461	4.154	3.863	3.587	3.324	3.076	2.840	2.617	2.407	2.208	2.021	1.845	1.679	1.523	1.377	1.240	1.113	0.995	0.886
29	4.616	4.298	3.997	3.710	3.439	3.181	2.937	2.706	2.488	2.283	2.089	1.907	1.735	1.574	1.423	1.282	1.150	1.027	0.915
30	4.776	4.447	4.135	3.838	3.557	3.290	3.037	2.799	2.573	2.360	2.159	1.971	1.793	1.627	1.470	1.324	1.188	1.061	0.945
31	4.942	4.601	4.278	3.970	3.679	3.403	3.141	2.894	2.660	2.440	2.232	2.037	1.853	1.681	1.519	1.368	1.227	1.096	0.976
32	5.113	4.760	4.425	4.107	3.805	3.519	3.248	2.992	2.750	2.522	2.307	2.105	1.915	1.737	1.570	1.413	1.267	1.132	1.008
33	5.290	4.925	4.578	4.248	3.936	3.639	3.359	3.094	2.844	2.608	2.385	2.176	1.979	1.795	1.622	1.460	1.309	1.170	1.041
34	5.474	5.095	4.736	4.394	4.071	3.764	3.473	3.199	2.940	2.696	2.465	2.249	2.045	1.854	1.676	1.508	1.352	1.208	1.075
35	5.663	5.271	4.899	4.545	4.210	3.892	3.592	3.308	3.039	2.786	2.548	2.324	2.114	1.916	1.731	1.558	1.397	1.248	1.110
36	5.859	5.453	5.068	4.701	4.354	4.025	3.714	3.420	3.142	2.880	2.634	2.402	2.184	1.980	1.788	1.610	1.443	1.289	1.147
37	6.062	5.642	5.242	4.863	4.503	4.163	3.840	3.536	3.248	2.977	2.722	2.482	2.257	2.046	1.848	1.663	1.490	1.331	1.184
38	6.272	5.836	5.423	5.030	4.657	4.305	3.971	3.656	3.358	3.078	2.813	2.565	2.332	2.113	1.909	1.718	1.539	1.374	1.223
39	6.489	6.038	5.609	5.202	4.817	4.451	4.106	3.779	3.471	3.181	2.908	2.651	2.410	2.184	1.972	1.774	1.590	1.419	1.263
40	6.714	6.246	5.802	5.381	4.981	4.603	4.245	3.907	3.588	3.288	3.005	2.739	2.490	2.256	2.037	1.833	1.642	1.466	1.304
41	6.946	6.462	6.002	5.565	5.152	4.760	4.389	4.040	3.709	3.398	3.106	2.831	2.573	2.331	2.104	1.893	1.696	1.514	1.346
42	7.186	6.684	6.208	5.756	5.328	4.922	4.538	4.176	3.834	3.513	3.210	2.925	2.658	2.408	2.174	1.955	1.751	1.563	1.390
43	7.435	6.915	6.421	5.953	5.510	5.090	4.692	4.317	3.964	3.630	3.317	3.022	2.746	2.487	2.245	2.019	1.809	1.614	1.436
44	7.692	7.153	6.642	6.157	5.698	5.263	4.852	4.463	4.097	3.752	3.428	3.123	2.837	2.570	2.319	2.086	1.868	1.667	1.482
45	7.958	7.400	6.870	6.368	5.892	5.442	5.016	4.614	4.235	3.878	3.542	3.227	2.931	2.654	2.395	2.154	1.929	1.721	1.531
46	8.233	7.655	7.107	6.586	6.093	5.627	5.186	4.770	4.377	4.008	3.661	3.334	3.028	2.742	2.474	2.225	1.992	1.777	1.580
47	8.517	7.919	7.351	6.812	6.301	5.818	5.362	4.931	4.525	4.142	3.783	3.445	3.129	2.832	2.556	2.297	2.057	1.835	1.632
48	8.812	8.192	7.603	7.045	6.517	6.016	5.544	5.097	4.677	4.281	3.909	3.560	3.232	2.926	2.639	2.373	2.124	1.895	1.685
49	9.117	8.474	7.864	7.286	6.739	6.221	5.731	5.270	4.834	4.424	4.039	3.678	3.339	3.022	2.726	2.450	2.193	1.957	1.739
50	9.432	8.766	8.135	7.536	6.969	6.432	5.926	5.447	4.997	4.573	4.174	3.800	3.450	3.122	2.816	2.530	2.265	2.020	1.796
51	9.758	9.068	8.414	7.794	7.206	6.651	6.126	5.631	5.165	4.726	4.313	3.926	3.564	3.225	2.908	2.613	2.339	2.086	1.854
52	10.095	9.381	8.703	8.060	7.452	6.877	6.333	5.821	5.338	4.884	4.457	4.056	3.681	3.331	3.003	2.698	2.415	2.154	1.914
53	10.444	9.704	9.002	8.336	7.706	7.110	6.548	6.017	5.517	5.047	4.605	4.191	3.803	3.440	3.102	2.786	2.494	2.223	1.976
54	10.804	10.038	9.311	8.621	7.969	7.352	6.769	6.219	5.702	5.215	4.758	4.330	3.928	3.553	3.203	2.877	2.575	2.296	2.040
55	11.177	10.383	9.630	8.916	8.240	7.601	6.998	6.429	5.893	5.389	4.916	4.473	4.058	3.670	3.308	2.971	2.658	2.370	2.105
56	11.563	10.741	9.960	9.221	8.521	7.859	7.234	6.645	6.090	5.569	5.079	4.621	4.191	3.790	3.416	3.068	2.744	2.447	2.173
57	11.962	11.110	10.302	9.536	8.811	8.125	7.478	6.868	6.294	5.754	5.248	4.773	4.329	3.914	3.527	3.167	2.833	2.526	2.243
58	12.375	11.492	10.655	9.861	9.110	8.401	7.731	7.099	6.505	5.946	5.422	4.931	4.471	4.042	3.642	3.270	2.925	2.607	2.316
59	12.802	11.888	11.020	10.198	9.420	8.685	7.992	7.338	6.722	6.144	5.602	5.093	4.618	4.174	3.761	3.376	3.020	2.691	2.390
60	13.244	12.297	11.398	10.547	9.741	8.980	8.261	7.584	6.947	6.349	5.787	5.261	4.770	4.311	3.883	3.486	3.117	2.778	2.467
61	13.687	12.720	11.789	10.907	10.073	9.284	8.540	7.840	7.180	6.561	5.979	5.435	4.926	4.452	4.010	3.599	3.218	2.867	2.546
62	14.129	13.144	12.193	11.280	10.416	9.600	8.829	8.103	7.421	6.779	6.178	5.615	5.089	4.597	4.140	3.715	3.322	2.960	2.628
63	14.586	13.567	12.599	11.666	10.771	9.926	9.128	8.376	7.670	7.006	6.383	5.801	5.256	4.748	4.275	3.836	3.429	3.055	2.712
64	15.058	14.005	13.004	12.053	11.139	10.263	9.437	8.659	7.927	7.240	6.596	5.993	5.430	4.904	4.415	3.961	3.541	3.154	2.800
65	15.544	14.456	13.422	12.439	11.506	10.612	9.757	8.951	8.193	7.482	6.816	6.192	5.609	5.066	4.560	4.090	3.656	3.256	2.890
66	16.047	14.922	13.853	12.837	11.874	10.961	10.087	9.253	8.469	7.733	7.043	6.397	5.794	5.232	4.709	4.224	3.775	3.362	2.984
67	16.531	15.403	14.298	13.248	12.253	11.310	10.418	9.565	8.753	7.991	7.277	6.610	5.986	5.405	4.864	4.362	3.898	3.471	3.080
68	16.960	15.865	14.756	13.672	12.643	11.669	10.747	9.877	9.047	8.259	7.520	6.829	6.184	5.582	5.023	4.505	4.025	3.584	3.180
69	17.327	16.275	15.198	14.108	13.046	12.039	11.087	10.188	9.341	8.534	7.770	7.055	6.387	5.766	5.188	4.652	4.156	3.700	3.283
70	17.297	16.625	15.588	14.528	13.460	12.420	11.436	10.508	9.633	8.809	8.027	7.288	6.597	5.954	5.357	4.803	4.291	3.820	3.389
71		16.594	15.921	14.899	13.858	12.812	11.796	10.837	9.933	9.083	8.284	7.528	6.813	6.149	5.531	4.959	4.430	3.943	3.498
72			15.889	15.215	14.209	13.189	12.166	11.176	10.242	9.364	8.539	7.766	7.036	6.348	5.710	5.119	4.572	4.070	3.611
73				15.182	14.508	13.521	12.521	11.524	10.560	9.653	8.801	8.003	7.257	6.554	5.894	5.283	4.719	4.200	3.726
74					14.474	13.802	12.834	11.858	10.886	9.949	9.070	8.246	7.476	6.758	6.083	5.452	4.869	4.334	3.845
75						13.768	13.099	12.151	11.199	10.255	9.347	8.496	7.701	6.960	6.271	5.625	5.024	4.471	3.966
76							13.065	12.400	11.474	10.547	9.631	8.753	7.933	7.168	6.457	5.797	5.182	4.612	4.091
77								12.366	11.707	10.804	9.904	9.018	8.171	7.381	6.648	5.968	5.339	4.757	4.219
78									11.673	11.022	10.144	9.271	8.416	7.601	6.844	6.143	5.495	4.900	4.351
79										10.988	10.346	9.494	8.651	7.827	7.046	6.323	5.655	5.042	4.482
80											10.313	9.682	8.857	8.044	7.254	6.508	5.819	5.188	4.610</

SECTION C AN INTRODUCTION TO OFFSETTING

Preamble

- C.1. The remedy of offsetting differences in a divorcing couple's pensions using non-pension capital has been commonplace in such financial remedy proceedings for some time. Indeed, it can be said that such a remedy predates all others, with the remedy of Pension Sharing Orders having been available from December 2000 onwards.
- C.2. This document is intended solely to showcase the Galbraith Tables and detail their application; it is not intended to serve as a textbook upon the remedy of offsetting in respect of pension rights upon divorce (less still any other such remedies). However, it is noted that a brief explanation of what is meant by offsetting of pension rights may well be deemed useful at this stage.
- C.3. Throughout this document, when the specifics of parties' pensions upon divorce are discussed, we shall refer to "the husband" and "the wife". However, it is accepted that there will be divorces in respect of same-sex marriages, and these tables may be deemed to be equally applicable.
- C.4. Likewise, the words "dissolution of a civil partnership" may be substituted for the word "divorce" throughout, with the legal processes pertaining to the dissolution of a civil partnership entered into under the Civil Partnership Act 2004 being understood to be analogous to divorce in respect of a marriage.

The basics of offsetting

- C.5. Offsetting allows each of the divorcing parties to retain his or her own pension rights, and *in lieu* of the pensions being shared, the party with the lesser pension rights then retains a larger amount of non-pension assets.
- C.6. For example, the husband has an arrangement with a leading pensions provider which has a Cash Equivalent Transfer Value (CETV)³ of £100,000. He retains this pension following the divorce, and the wife retains an additional £100,000 of cash. Is this fair?
- C.7. Offsetting always creates issues in terms of how much should one provide to one party in non-pension assets *in lieu* of the other party having greater pension assets, with various legal precedents providing some different perspectives on this. The extent to which non pension capital should be discounted against pension capital is often a contentious area.
- C.8. Other important points to consider in respect of offsetting are as follows:
- Offsetting can only be used if there are sufficient 'other assets' held by the parties with which the difference in the pension assets can be offset.
 - It is possible to use a mixture of offsetting and pension sharing (not a consideration of these tables) if the circumstances of particular cases dictate that this would lead to the fairest settlement.
 - Much greater flexibility exists where non-pension capital is used by way of offset. For example, no minimum pension age attaches to non-pension capital amounts.
- C.9. Further useful background information upon the specifics of offsetting is to be found in Part 7 of the PAG Report (both the original and revised edition) that was discussed earlier in this document. Indeed, the PAG Report is increasingly being seen as the definitive guide upon pensions matters that pertain to divorce.

³ This is the term that shall be used in this document, but transfer value, Cash Equivalent Value (CEV), Cash Equivalent (CE) and other such variations are also applicable.

“More than” versus amount given

C.10. In our experience, one of the greatest difficulties in dealing with offsetting figures is whether these are defined in terms of:

- One party having £X amount “more than” the other in non-pension capital; or
- One party receiving £Y amount of non-pension capital from the other by means of offsetting.

C.11. This an opportune moment to clear up this issue: let us assume that A and B are two parties who have between them £200,000 in funds.

C.12. An equal split is obviously £100,000 each, but it must be noted once the split has been effected that every £1 that A gives to B (from A's own £100,000) means that B then has £2 “more than” A in funds.

C.13. Thus if it were to be agreed that B should have £40,000 more than A, this can be effected in two ways (which both lead back to the same overall result):

- If the monies have yet to be divided, then B need simply retain £120,000 and A £80,000, to give the desired split; while
- If the monies have already been divided, and each has £100,000, then A need give B some £20,000 from his own share (half of the difference of £40,000) such that again B has £40,000 more than A.

C.14. All offsetting amounts considered in this document will be expressed in the “more than” form i.e. the amount that the party with the lesser pension capital need retain in excess of that to be held by the party with the more generous pension provision.

SECTION D ASSUMPTIONS USED IN THESE TABLES

Overarching principles

- D.1. In broad terms, these Galbraith Tables value pension rights upon the basis of an individual seeking to replicate a defined benefit pension promise in retirement through i) the investment of defined contribution pension monies through to the assumed date of retirement, with ii) the accumulated fund then being drawn down over the individual's expected period of retirement.
- D.2. Thus the tables may be used to determine the answer to the question "*what is the present value of a pension of £1 pa, payable from a given retirement date?*", or more accurately, "*what level of defined contribution funds do I need today to replicate a pension of £1 pa, payable from a given retirement date?*".
- D.3. It follows that where immediate retirement is mooted or a pension in payment is valued, the first step above is trivial.
- D.4. Similarly, we provide a table that simply allows for the first (pre-retirement) step, which may be used for the valuation of tax-free cash lump sums that accompany pension rights.
- D.5. The pre-retirement phase assumes that monies in a defined contribution pension arrangement are used, rather than explicitly non-pension assets. However, in Section G we discuss tax and utility adjustments that might be applied to such non-pension assets then to allow a fair comparison to be made with defined contribution pension monies.
- D.6. The post-retirement phase allows in effect for a "sinking fund" i.e. an accumulated fund that is expected to be drawn down at a rate in excess of likely investment returns, such that at the time of death, the fund has been exhausted. This is inherently the same approach that underpins the Duxbury tables, which are predominantly used to capitalise maintenance payments.
- D.7. Other means exist by which an individual might seek to replicate a pension income in retirement, with perhaps the most obvious approach being via annuity purchase i.e. where the individual purchases a product that will provide a guaranteed income for life.
- D.8. However, we reject the use of annuity purchase in compiling these tables on the grounds that i) annuity pricing is sensitive both to changes in market movements and insurers' commercial considerations, and ii) there exists a perception amongst consumers that annuities are "expensive" and reflect poor value for money.
- D.9. Indeed, given that the requirement to purchase an annuity using defined contribution pension monies was relaxed following HM Treasury's "pension freedoms" of 2015, it was felt that alternative approaches ought to be considered in preparing these tables.
- D.10. It is assumed throughout that inflation linkage will apply to the pension rights both before and after retirement, and moreover that such inflationary increases will follow the Consumer Prices Index (CPI) measure of price inflation. This is discussed further in this Section.
- D.11. Most importantly, it is noted that what is shown herein is but one possible means by which pension rights may be valued, and it is by no means intended to be definitive. Pension on divorce experts—and indeed pensions professionals in general—will note that there are many alternative means by which pension rights may be attributed a present value.

Pre-retirement assumptions

- D.12. It is assumed that over the accumulation (pre-retirement) period, a single contribution will be made at the date of the calculation i.e. the amount of offset capital itself. No allowance for further contributions nor withdrawals will be made thereafter until retirement.

- D.13. No allowance is made for pre-retirement mortality i.e. the tables assume that the individual will always survive to retirement age.
- D.14. Further, no allowance is made to replicate any pre-retirement death benefits that may attach to the pension rights e.g. any death-in-service or death-in-deferment lump sum, or any spouse's / children's pensions payable under such circumstances.
- D.15. The funds will be assumed to accumulate in line with assumed investment returns, which will take account of a possible investment strategy as shown below.
- D.16. Investment returns for the various asset classes considered in the investment strategy are as shown in the table below:

Equities	6.00% pa
Corporate bonds	4.50% pa
Government bonds (Gilts)	4.25% pa
Cash	3.75% pa

- D.17. These rates of return are i) assumed to be after the deduction of any investment expenses, and ii) rounded to the nearest 0.25% pa.
- D.18. Further, these are nominal rates that are to be used with our assumption that price inflation will be 2.00% pa in the period to retirement (itself chosen as the inflation target for the Bank of England as set by HM Treasury). Real rates may be derived from deducting 2.00% pa from the figures in the table above.
- D.19. In Version 1.0, the rates used were informed by *"Accumulation rates used by providers of statutory money purchase illustrations since 6 April 2020"*⁴ as published by the Financial Reporting Council (FRC) in respect of the rates used by pension providers in preparing Statutory Money Purchase Illustrations

(SMPs) under actuarial standard Technical Memorandum 1 (AS TM1).

- D.20. However, AS TM1 changed with effect from 1 October 2023, with providers being required instead to use growth rates that reflect the volatility of the underlying fund, as measured with a prescribed formula.
- D.21. This approach is less suited to being used in these circumstances, and it is noted that there has been no update to the 2020 document hitherto relied upon that was discussed above.
- D.22. In terms of general economic trends that have occurred since the publication of Version 1.0, it is noted that UK interest rates and bond yields are at higher levels than was the case before Q3 2022. Since then, there appears to have been something of a paradigm shift in market conditions, with monetary policy being used by the Bank of England to control the inflation that emerged in the UK economy following the measures that were taken by HM Government to tackle the COVID 19 pandemic.
- D.23. Any attempt to allow for such changes in market movements will by definition lead to higher investment return assumptions being made from those hitherto adopted. It is noted that the selection of investment returns by class was based on an iterative process such that the overall return was consistent in broad terms with MCL's own pre-retirement investment model.
- D.24. In the selection of investment returns for each class of asset described above, the key changes made from Version 1.0 are:
- the returns deemed to be available on lower-risk assets (cash and gilts) have been increased in light of what is set out above; and
 - the risk premiums deemed to be available through the holding of higher-risk assets are

⁴ This document is to be found at <https://www.frc.org.uk/getattachment/e311e4e7-9a87-485f-ad59-3a8d8f8e5841/AS-TM1-accumulation-rate-survey-FINAL.pdf>.

reduced, such that the full increase in the returns on lower-risk assets is not passed on.

D.25. Combined, this has the effect of producing a much “tighter” spot rate curve than was previously the case (see below).

D.26. In terms of the investment strategy hypothesized for Version 2.0, it is assumed again that a term-dependent approach will apply, with higher-risk assets being held the further that one is from retirement, and a gradual shift then being made towards lower-risk assets as retirement approaches.

D.27. This approach is commonly known as “lifestyling” by defined contribution pension providers, and it recognises the fact that an individual may better accommodate significant fluctuations in fund value the further one is from retirement, with greater certainty and protection against such volatility typically being desired where one has a reduced opportunity in which to make good any investment losses that occurs.

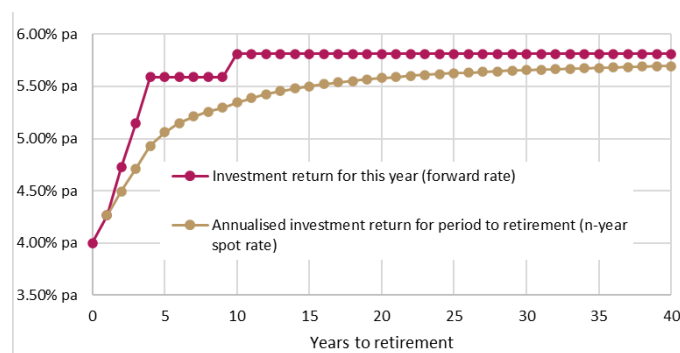
D.28. The investment strategy assumed within the tables is broadly set out as follows, with this reflecting what was adopted before in Version 1.0:

- 10+ years from retirement, assets are held mainly (90%) in equities, with minimal holdings (10%) in corporate bonds and cash;
- Where there is a 3–10 years period to retirement, the corporate bond holding increases to 20% at the expense of the equities holding (now 75%), with 5% in cash; and
- Over the final three years to retirement, the investments are gradually moved to a lower risk equal split between gilts and cash.

D.29. We propose that this may be deemed to reflect the strategy that an investor with an “average” risk appetite might wish to adopt in the period to retirement with reference to defined contribution pension funds held.

D.30. The chart below sets out details of the forward rates and spot rates implied by this strategy:

Investment returns implied by proposed strategy over period to retirement



D.31. The spot rate that applies at 15 years is 5.50% pa as per the chart above. This reflects a c. 1.30% pa increase from what was used in Version 1.0 of the tables, when the rate was around 4.20% pa.

D.32. As before, it is important to note that nothing shown in the tables or elsewhere within this document reflects any form of financial advice whatsoever upon such matters as:

- What might constitute an “optimal” investment strategy for investors with any particular risk appetite;
- The correct allocation of assets between classes to hold at a particular time (recognising that more asset classes exist for investment purposes than are shown in the earlier table);
- The actual assets to be held within each class (providers, specific funds, active *versus* passive investment etc);
- The principle and merits of “lifestyling” as opposed to maintaining a consistent asset allocation over the period to retirement.

D.33. It is recognised that many alternative strategies may be used to project monies held today to a later retirement age: **what is shown herein is simply one possible approach, and once again no**

advice is given as to the merits thereof in comparison to any other such strategy.

D.34. In particular, it may well be argued that:

- The approach outlined above is insufficiently prudent, as pension rights in a defined benefit arrangement (i.e. what we seek to value) are protected against pre-retirement investment risk, and therefore it is improper to assume that an individual will incur such risks when seeking to replicate such deferred pension benefits; or in the alternative
- The approach outlined above is overly prudent, as a “lifestyling” strategy is one that lends itself to annuity purchase at retirement, while under a drawdown approach it is perhaps not necessary to move to a fully “derisked” position in the period leading to retirement on the grounds that the post-retirement period of decumulation may last 15–20 years.

D.35. Once again, such considerations notwithstanding, the strategy above is the one that shall be used in the derivation of the tables shown later in this document.

D.36. Any individual who receives financial assets as part of a divorce settlement—whether pension monies or non-pension assets—is strongly encouraged to seek financial advice as to how best such monies might be used to provide for his/her future. **No such financial or investment advice is provided within this document.**

Post-retirement assumptions

D.37. As alluded to earlier, it is assumed that an income drawdown solution shall be pursued to “run off” the accumulated fund over the expected period of retirement.

D.38. No expenses shall be allowed for at retirement, on the grounds that no explicit product is being purchased.

D.39. The income drawn in retirement shall be assumed to increase at a rate of 2.50% pa, with this being expected to follow CPI, but with an allowance for a 0.50% pa inflation risk premium⁵.

D.40. Monies shall be assumed to be invested in a prudent manner, with these being split equally between Government bonds and cash. The assumed rate of investment returns post-retirement is 4.00% pa, consistent with the financial assumptions made earlier.

D.41. In terms of the period over which the fund is assumed to be drawn down, this is determined with reference to the S3 PA mortality tables, with year of birth projections to the assumed year of retirement. The CMI 2021 projections are made, subject to minimum 1.50% pa (male) or 1.25% (female) rates of improvement, and reflective of some adjustments made for 2020 and 2021 data in light of the COVID 19 pandemic. Such mortality tables are available from the Continuous Mortality Investigation (CMI), which is operated by the Institute & Faculty of Actuaries.

D.42. These mortality assumptions broadly reflect those used by the Pension Protection Fund (PPF) where an assessment is made of a pension scheme’s solvency (whether it has sufficient funds to allow the pension benefits to be “bought out” by an insurer). They are therefore deemed to be largely consistent with what is used by insurers when seeking to price an annuity.

D.43. Further, sex-specific tables shall be used i.e. the S3 PMA and PFA tables accordingly. It was deemed appropriate to make an allowance for sex-specific mortality patterns—in particular, that women tend to outlive men—despite that fact that annuity

⁵ This is the “extra” that an individual might be prepared to pay to secure an income that is inflation-proofed in retirement.

pricing is no longer sensitive to this following the Test-Achats case⁶.

D.44. However, it is possible to “override” the sex-specific nature of these tables by taking an average of the relevant figures for males and females of the same current age and assumed retirement age.

D.45. Sample life expectancies are as shown in the table below:

Age today	Assumed retirement age	Life expectancy in retirement (years)	
		Males	Females
20	60	28.5	30.3
40	60	26.6	28.9
60	60	25.3	27.5
80	80	9.2	10.4

D.46. These life expectancies are then scaled up by 10% to introduce a margin for prudence i.e. the fund is assumed to last for 110% of the life expectancy suggested by the relevant mortality tables. This allowance is also assumed to take account of the fact that the use of such “curtate” life expectancy figures lead to periods emerging that are on average six months short of the “complete” figures that would otherwise emerge.

D.47. It is assumed that each individual may be said to be in “normal” or “typical” health for one of his / her age at retirement: no allowance is made for possible curtailments in life expectancy. It follows that if one is in ill-health and/or has a significantly reduced life expectancy, then the use of such tables is unlikely to be appropriate.

D.48. Such considerations of life expectancy are “single life” in nature i.e. for the individual’s own life only. No allowance is made for benefits that may be payable to others e.g. another spouse upon remarriage.

D.49. It is noted that while the mortality assumptions have been amended since Version 1.0 was issued,

the revisions in respect of this point make scant impact on the overall results.

Inflation linkage and pension increases

D.50. As alluded to above, the tables allow for the indexation of pension benefits both before and after retirement in line with the CPI measure of price inflation. This has been chosen as it now forms the dominant method of indexation used (in particular, it is used throughout the public sector pension schemes).

D.51. It is noted that the tables need be applied to current pensions i.e. pensions as at the date of calculation. This is unlikely to present any problems in respect of the pensions of active scheme members (those accruing benefits) or pensions in payment, but when it comes to the deferred pensions of those who have left active service but have yet to retire, it may be necessary to “revalue” these to allow for the increases that have applied from date of leaving to date of calculation.

D.52. It is noted also that UK pensions may receive myriad increases both before and after retirement, with for example some pension elements being level, receiving fixed percentage increases, receiving increases in line with some measure of price inflation and / or being subject to caps and floors each year.

D.53. This document does *not* seek to codify or anthologise the UK pensions landscape and this is simply noted in passing: it is important however that a competent understanding of the specifics of any pension rights to be valued is achieved prior to one’s using the tables to place a value thereupon.

D.54. To the extent to which the tables are to be used with pensions that receive different rates of increase, it may be necessary for some manual adjustments to be made to the multiplicand.

⁶ Judgement of the Court (Grand Chamber) of 01 March 2011: C-236/09 – *Association Belge des Consommateurs Test-Achats ASBL and Others v Conseil des ministres*.

D.55. These adjustments might take the following form:

- Prior to retirement, non-CPI pension increases may be allowed for by means of projecting the pension benefits to retirement in line with actual increases and then discounting back to today with reference to CPI at an assumed rate of 2.50% pa.
- Post retirement, various actuarial “rules of thumb” may be used to allow for £1 pa of CPI-linked pension being more valuable than £1 pa of level pension (and less generous than, say, £1 pa of pension that receives fixed 5% pa increases).

D.56. Such adjustments are left to the practitioner’s discretion, but it must be remembered that the validity of such offsetting results is expected to deteriorate where significant actuarial adjustments are applied.

Taxation

D.57. It is assumed that the tables be used with pension incomes that are gross of income tax and lump sum

amounts that are payable tax-free under HMRC rules. Adjustments to be made to offsetting results in respect of tax are considered in Section G.

D.58. Version 1.0 of these Tables noted that considerations in respect of the Lifetime Allowance (LTA) tax regime—for those with generous pension provision—were well beyond the scope of the document. It is noted that at the time of writing, the LTA regime has been abolished in full as at 6 April 2024 but it remains to be seen whether a future government might seek to restore the LTA in some form in the future.

The use of other assumptions with the Tables

D.59. It is intended that these Galbraith Tables reflect the underlying assumptions above, in a manner akin to Duxbury i.e. there is one definitive set of assumptions from which the tables are based (contrary to the approach adopted with Ogden, whereby tables are published that show results using various net discount rates).

SECTION E HOW TO USE THE TABLES TO PRODUCE OFFSETTING FIGURES

Stages of offsetting

E.1. There are two stages to the process of offsetting, and I suggest that these are considered in turn for the purposes of the calculations that follow:

- Stage 1 refers to the valuation of pension benefits for offsetting purposes i.e. how to value the pensions in a manner that is both internally consistent and consistent with the valuation of non-pension capital.
- Stage 2 refers to how any such amounts should be adjusted in relation to tax and utility to allow a fair comparison to be made with non-pension capital amounts.

E.2. The operation of the tables relates to what is dubbed Stage 1 above; matters pertaining to Stage 2 (being tax and utility adjustments) are discussed in Section G.

Methods of valuing defined benefit pensions for offsetting purposes

E.3. Within what is described as Stage 1 above, there are inherently two ways in which defined benefit pension promises—those expressed in pounds per annum terms, which can include State pensions and annuities now in payment that were purchased using defined contribution funds—can be valued for offsetting purposes.

E.4. These are as set out below:

- In the first instance, the husband's pensions are valued in terms of what benefits they provide to him, and the wife's pensions in terms of what they provide to her. This is a "capital" measure of pension rights i.e. figures that may be placed upon the balance sheet for the purposes of the divorce.
- In the second instance, both parties' pensions are valued in terms of the shortfall in benefits that pertains to the individual with the lesser pension provision i.e. we determine how much this individual requires by way of offset to

make up the shortfall in pension rights at retirement. This is by nature an "incomes" measure of pension rights.

E.5. These two measures will produce equal results where the parties are either i) retired and identical in age, or ii) identical in age and assumed to retire at a later common age. It follows that where there is a divergence in ages, the two methods will produce different results, dependent variously upon

- the fact that the older one is at retirement, the smaller the amount of capital that is required to provide pension benefits; and
- the longer the period of deferment, the greater the allowance that may be made for investment returns on capital provided for offsetting purposes.

E.6. A similar approach may also be adopted in respect of lump sums that accompany these pensions and are payable upon retirement.

E.7. Practitioners and affected individuals must understand the context of any such figures that then emerge, in particular where such a difference in ages exists.

E.8. It is assumed throughout that the pension rights to be considered will be UK-based in nature. It *may* be appropriate to seek to value overseas pension rights using these tables—as per what is stated in Paragraphs D.48–D.54—but this relies upon certain assumptions about inflation linkage which may or may not be applicable.

The arithmetic associated with the factors

E.9. As with the Duxbury and Ogden tables, the tables shown herein rely upon the arithmetic of

$$\text{Multiplicand} \times \text{Multiplier}^7$$

with the **Multiplicand** being the pension (or lump sum) benefit, in present day terms, that is to be valued and the **Multiplier** being drawn from the tables shown herein.

E.10. Thus it is necessary to value the pension rights of husband and wife separately, and then subtract the smaller figure that then emerges from the larger one.

E.11. In terms of which Multipliers to use, this depends on the method that is to be adopted. In particular:

- For the Capital measure, value each benefit with reference to who holds it i.e. value husband's pensions / lump sums using factors that reflect his particulars, and value wife's pensions / lump sums using factors that reflect her particulars.
- For the Income measure, value all benefits from the perspective of the recipient of the offsetting capital i.e. if husband has the greater pension provision, value all pensions / lump sums using factors that reflect the wife's particulars.

E.12. At the expense of introducing some mathematical notation, we note that the table below sets out how the Multipliers are used with the various Multiplicands, depending upon the method adopted and whether pension rights or cash lump sums are being considered:

Multiplicand considered	Multiplier to use	
	Capital measure	Income measure
H's pension	$F_{P,H}$	$F_{P,L}$
H's lump sum	$F_{C,H}$	$F_{C,L}$
W's pension	$F_{P,W}$	$F_{P,L}$
W's lump sum	$F_{C,W}$	$F_{C,L}$

E.13. In respect of the notation used in the table above:

- $F_{P,x}$ refers to a pension valuation factor;
- $F_{C,x}$ to a cash lump sum valuation factor;
- $x=H$ refers to the husband;
- $x=W$ refers to the wife; and
- $x=L$ refers to which of the two parties (H or W) has the lesser pension provision.

E.14. Thus $F_{P,H}$ is the factor used to value the pension payable to the husband. $F_{C,L}$ is the factor used in the income measure calculation to value lump sums, with this being defined with reference to the party that has the lesser overall pension rights (i.e. the wife if the husband has the greater pension provision).

E.15. This is perhaps best explained by means of a number of worked examples. In the interests of simplicity, the parties' names will change in each example, but the husband's name will always begin with an H and the wife's with a W.

E.16. It is assumed in all such examples that pension benefits are linked to the CPI measure both before and after retirement. As alluded to earlier, where

⁷ It is hoped that the reader might forgive the use of such mathematical terminology, albeit that which is also used in the Ogden Tables. In short, the Multiplier is the factor that comes from the tables, and the Multiplicand is "the thing that is being multiplied" i.e. the pension benefits that are to be valued.

benefits receive other such increases (or indeed where they are non-increasing) it will be necessary for some adjustments to be made.

E.17. Further, all pension benefits are shown in current terms i.e. were these in respect of deferred pension rights, an allowance has been made for revaluation from date of leaving to date of calculation.

Example 1: Harry and Wilma

E.18. Harry is aged 45, Wilma is aged 40. Harry has an accrued pension of £15,000 pa and three-times lump sum of £45,000 that are payable at age 60. Wilma has an accrued pension of £8,000 pa that is payable at age 60. Neither party has any defined contribution funds (considered later in Section F).

E.19. On the capital measure, the benefits are valued as follows:

Capital measure of offset amount			
	Multiplicand	Multiplier	Value
H's pension	£15,000 pa	14.330	£214,950
H's lump sum	£45,000	0.620	<u>£27,900</u>
Value for H			£242,850
W's pension	£8,000 pa	12.903	£103,224
W's lump sum	£0	0.516	<u>£0</u>
Value for W			£103,224
<i>Difference (offset amount)</i>			£139,626

E.20. Likewise, on the income measure, the benefits are valued as follows:

Income measure of offset amount			
	Multiplicand	Multiplier	Value
H's pension	£15,000 pa	12.903	£193,545
H's lump sum	£45,000	0.516	<u>£23,220</u>
Value for H			£216,765
W's pension	£8,000 pa	12.903	£103,224
W's lump sum	£0	0.516	<u>£0</u>
Value for W			£103,224
<i>Difference (offset amount)</i>			£113,541

E.21. Thus it can be seen that Harry has the greater pension provision, and therefore Wilma will be the recipient of non-pension offset capital.

E.22. Looking at the multipliers above, one can see that we use the same factors for Harry and Wilma when we come to the incomes measure, and in particular we use factors that pertain to Wilma as she will be the recipient of the non-pension capital. By contrast, when we considered capital values, we used each party's own factors for valuation purposes.

E.23. Consequently, Wilma requires a smaller amount of non-pension capital by way of offset when she seeks to match Harry's income in retirement than on a capital measure (£114k to £140k). This is because she is five years younger than him, and monies in her hands can be invested for longer prior to retirement.

Example 2: Horace and Wendy

E.24. Horace and Wendy are both pensioners; he is aged 67 and she is 64. He is in receipt of a pension income of £25,000 pa while her income is £11,000 pa. All defined contribution monies were used to purchase annuities that were taken into account in the incomes above, and there are no lump sums to consider.

E.25. Once again, the application of the factors is predicated upon the pensions being assumed to follow price inflation as measured by CPI in retirement.

E.26. On the capital measure, the benefits are valued as follows:

Capital measure of offset amount			
	Multiplicand	Multiplier	Value
H's pension	£25,000 pa	17.784	£444,600
H's lump sum	£0	1.000	<u>£0</u>
Value for H			£444,600
W's pension	£11,000 pa	21.418	£235,598
W's lump sum	£0	1.000	<u>£0</u>
Value for W			£235,598
<i>Difference (offset amount)</i>			£209,002

E.27. On the income measure, the figures are as follows:

Income measure of offset amount			
	Multiplicand	Multiplier	Value
H's pension	£25,000 pa	21.418	£535,450
H's lump sum	£0	1.000	<u>£0</u>
Value for H			£535,450
W's pension	£11,000 pa	21.418	£235,598
W's lump sum	£0	1.000	<u>£0</u>
Value for W			£235,598
<i>Difference (offset amount)</i>			£299,852

E.28. Thus Wendy requires more non-pension capital to match Horace's income than simply to equalise the capital value of their respective pensions: this is because she is younger than he and is expected to live longer than him in retirement. In turn, the cost of providing a notional £1 pa of pension income is higher for her than it is for him (£21.418 to £17.784).

SECTION F SPECIAL CONSIDERATIONS WHEN USING THE TABLES

The treatment of defined contribution pension funds

- F.1. It is generally accepted that defined contribution funds may be offset on a pound-for-pound basis, at least prior to any adjustment for tax / utility.
- F.2. This is especially true given the “pension freedom” regime that was introduced by HM Treasury in 2015, with such monies as are held in a defined contribution fund being regarded as being the same as monies in a bank or building society account, except that tax need be paid in order to access such funds. Francis J—sitting as a deputy in the High Court at the time—came to the same conclusion in *SJ v RA* [2014] EWHC 4054 (Fam).
- F.3. Thus on the capital measure, such defined contribution funds are valued using a factor of 1.
- F.4. However, where an incomes measure is adopted, it must be recognised that a notional £100k of defined contribution funds will produce a different level of income for H and W where there is a material age gap between them. In turn, some finessing of the calculation is required where defined contribution funds are used as part of an offsetting calculation on the incomes measure.
- F.5. This can be rectified by using a factor of 1 for the party with the small pension provision (i.e. the recipient of any offset capital) and for the other party, a factor of $F_{P,L} \div F_{P,G}$ where again $F_{P,L}$ is the pension factor for the individual with the lesser pension rights, and $F_{P,G}$ is the pension factor for the individual with the greater pension rights.
- F.6. Again, this relies on mathematical notation, and is perhaps best illustrated by means of an example, and it is further noted that the application of the factors is predicated upon:

- All deferred pensions being assumed to be revalued to the date of the calculation; and
- All pensions being stated in CPI terms both before and after retirement.

Example 3: Hector and Willow

- F.7. Hector is 35 and Willow is 40, Hector has an accrued pension of £10,000 pa that is payable at age 65. He also has defined contribution funds of £250,000 and Willow has funds of £50,000.
- F.8. On the capital measure, the benefits are valued as follows (with factors of 1 being used for each defined contribution fund):

Capital measure of offset amount			
	Multiplicand	Multiplier	Value
H's pension	£10,000 pa	7.402	£74,020
H's lump sum	£0	0.358	£0
H's DC funds	£250,000	1.000	<u>£250,000</u>
Value for H			£324,020
W's pension	£0 pa	9.437	£0
W's lump sum	£0	0.430	£0
W's DC funds	£50,000	1.000	<u>£50,000</u>
Value for W			£50,000
<i>Difference (offset amount)</i>			£274,020

- F.9. On the income measure, the figures are as follows:

Income measure of offset amount			
	Multiplicand	Multiplier	Value
H's pension	£10,000 pa	9.437	£94,370
H's lump sum	£0	0.430	£0
H's DC funds	£250,000	1.275 ⁸	<u>£318,731</u>
Value for H			£413,101
W's pension	£0 pa	9.437	£0
W's lump sum	£0	0.430	£0
W's DC funds	£50,000	1.000	<u>£50,000</u>
Value for W			£50,000
<i>Difference (offset amount)</i>			£363,101

⁸ Being the factor of 9.437 divided by 7.402, reflective of the point made in F.4–F.5.

F.10. Thus the defined benefit pension promise to Hector is valued as before, and on the capital measure, the defined contribution funds are simply added to the total amounts of pension capital for each party.

F.11. However, when it comes to the incomes measure, it is necessary to adjust the value of Hector's defined contribution fund when determining how much Willow needs in respect thereof by way of offset. On account of Willow's being five years older than Hector, the cost to her to secure a notional £100 pa annuity income in retirement is greater, and in turn the $F_{P,L} \div F_{P,G}$ multiplier scales up his £250,000 of defined contribution funds.

Active membership of a defined benefit pension scheme

F.12. It is typical to consider pension rights on a "leaving service benefits" basis i.e. to assume that the individual leaves active service of the pension scheme as at the date of calculation.

F.13. In so doing, no allowance is made for i) any further accrual of benefits, ii) future salary linkage (to the extent that salary growth may be said to outstrip price inflation), or for iii) any special terms (such as enhanced early retirement) that may pertain only to active members.

F.14. This is another matter where one may wish to seek the advice of pensions expert to provide support and produce results that may be relied upon in any court settlement.

Multiple pensions with different retirement ages

F.15. The arithmetic above is predicated upon there being a single point at which each party's pension rights are put into payment, with this either being:

- Immediately, at current age, in respect of pensions in payment; or
- At a fixed age some years into the future, where pensions are not yet in payment.

F.16. Where this is the case, it is reasonable to total up each party's defined benefit pension rights, attaching lump sums and defined contribution funds, rather than consider these separately.

F.17. It follows however that an individual may have pensions that are payable at different retirement ages, or may be in receipt of some benefits now, with others to be taken at a later age (including perhaps State pensions). Under such circumstances, it is necessary to value each pension separately using the *Multiplicand* \times *Multiplier* formula.

Guaranteed annuity rates and other benefit promises attaching to defined contribution funds

F.18. The commentary in respect of pension rights held in defined contribution funds above assumes that these are conventional in nature i.e. with no benefit promises being made. It follows that a different treatment may be needed where such terms attach to a policy.

F.19. Some defined contribution pension policies taken out prior to c. 2000 come with the benefit of a guaranteed annuity rate (GAR), which means that the holder has the right to convert the fund into an annuity income on agreed terms. These contracts date back to a time when annuities were cheaper to provide than today, and it follows that such GARs may offer considerable value beyond the face value of the fund.

F.20. Under such circumstances, it is necessary to determine the expected income under the GAR, and then value such pension rights as being defined benefit in nature.

F.21. Other benefit promises may attach to seemingly defined contribution arrangements e.g. Guaranteed Minimum Pension (GMP) underpins on benefits bought out with insurers, minimum levels of investment returns and guaranteed fund values. Such benefits need be considered on a case-by-case basis, and the use of these tables is no substitute for seeking advice from a pensions expert.

Defined contribution funds with fund values that differ from the CETVs

- F.22. Similarly, it follows that the CETV—or transfer value payable—of a defined contribution plan may differ from the underlying fund value.
- F.23. CETVs typically exceed fund values where the arrangement is with-profits in nature, with the CETV making an allowance for bonuses that have not yet been awarded to the fund. By contrast, where the CETV is lower than the fund value, it is usually associated with some penalty / charge that is applied to effect such a transfer.
- F.24. A simple rule of thumb in such cases is to take the higher of the two figures, on the grounds this is usually the one that can be realised, by effecting a transfer where this is necessary. However, it may be necessary to gain a deeper understanding of the terms of the pension arrangement that the individual holds from its provider.

Defined benefit pensions with “generous” CETVs

- F.25. The approach set out in the prior Section in respect of defined benefit pension rights makes no reference whatsoever to the Cash Equivalent Value (CETV) of the pension, and instead considers only the value of the income stream that may be determined using the tables.
- F.26. In most cases, this will be entirely reasonable, on the grounds that the CETV will fall short of the calculated value of the benefits (on either the incomes or capital measure). Given that the CETV of the pension will only be realised either in full where a transfer is taken, or in part where a Pension Sharing Order is applied, it follows that the CETV of such pension rights may be deemed to immaterial.
- F.27. However, some defined benefit pension schemes pay out very generous CETVs, whether on grounds of the scheme being well-funded with a prudent investment strategy, or with a view to members being encouraged to take up such generous terms.
- F.28. Where a CETV provides a value that is greater than the calculated value of the rights using the table, it

could be argued then that the CETV be used in place of the calculated value, on the grounds that this is the true amount that may be “released” from the pension arrangement.

F.29. Nonetheless, it should be noted that:

- The holder of the pension must be prepared to realise the additional value by means of a “DB to DC transfer” i.e. transferring-out the pension rights to unlock the extra value included in the CETV.
- It is noted that formal financial advice will need to be taken before either the defined benefit scheme or the receiving arrangement will permit such a transfer to proceed.
- Experts will disagree upon whether a CETV may be deemed to be “in the money” or otherwise, and such assessments depend very heavily upon the assumptions made which may well differ between individuals (appetite for investment risk *etc*).
- Finally, the CETV must be capable of being taken: this will not be possible where the member has passed Normal Retirement Age (NRA) and is in general not possible in public sector defined benefit schemes (or pension rights secured in the Pension Protection Fund).

F.30. It is accepted that different treatments may well be deemed applicable where a generous CETV is payable by a scheme in respect of defined benefit rights held therein.

Cash balance schemes

F.31. These are arrangements that are inherently defined benefit in nature before retirement, and defined contribution in nature after retirement. Typically, the individual builds up a salary-linked fund which is then used to secure benefits in retirement but with no explicit promises being made as to what the funds might secure.

F.32. Such arrangements ought to be considered on their own individual merits, but in general it might be appropriate to determine the expected fund as at retirement age, express this in today's money terms and then treat what remains as a defined contribution arrangement as discussed above.

SECTION G POSSIBLE ADJUSTMENTS TO CALCULATED OFFSETTING FIGURES

Introduction

G.1. It is generally accepted that monies held outside a registered UK pension arrangement are potentially more tax efficient than is an amount of pension capital. This is because the latter can only be used to provide taxable income—after any tax-free lump sum has been taken—whereas non-pension capital can be used to generate income with no tax. (Alternatively, a fund of £10,000 of cash can be converted into a pension fund of £12,500, after basic rate tax relief.)

G.2. Given the choice between having £10,000 of cash or £10,000 of pension funds, most people would elect for £10,000 of cash. This is because it is more flexible, accessible, and liquid than monies in a pension fund—this is what is often referred to as the “Utility Argument”. However, it must be noted that this argument is not always applicable, as discussed below.

G.3. It is therefore necessary to adjust any calculated amount of non-pension capital as might emerge from the tables shown earlier in respect of offsetting to reflect:

- the greater **tax** efficiency compared to any equivalent amount in a pension fund; and
- the greater **utility** of the monies, where this is applicable.

Tax adjustments

G.4. With regards to the first adjustment for income tax, there is some consensus that the adjustment is either 15% if the person with the greater pension income will be a basic rate taxpayer in retirement or 30% if they are forecast to be a higher rate taxpayer in retirement. These amounts reflect the current tax rates and assume that 25% of the pension funds can be taken tax-free.

G.5. It is possible that if the pension assets are very small indeed, and the State pension is minimal, that the adjustment for tax could be less than 15%. It is also possible that the adjustment for tax could be

greater than 30%, if the pension holder is in the 45% tax bracket, or it could be between 15% and 30% if the pension straddles basic and higher rate tax.

G.6. It follows also that if the pensions are in payment then no tax-free cash lump sums can be accessed and rates of 20% or 40% should apply.

G.7. No adjustments need be made in respect of National Insurance Contributions (NICs), as pension incomes are not subject to NIC deductions even where the recipient has yet to attain State Pension Age.

G.8. These comments are deemed applicable as at the time of writing, but it must be noted that any revisions to the income tax regime (in particular around rates, bands and allowances) could lead to other adjustments being applicable instead.

Utility adjustments

G.9. It is the view of the Pension Advisory Group—as set out in the PAG Report, discussed earlier—that any adjustment for utility is what is called a section 25 factor i.e. it depends upon the specific facts of the case. Ultimately it is for the Court to decide upon what utility argument exists, with it having had the opportunity to consider all of the facts of the case.

G.10. Some of the factors for assessing the size of the utility argument are set out as follows:

- If the non-pension capital being offered relates to equity in the Former Matrimonial Home, and this meets a very basic housing need, it could be argued that such an asset is perhaps almost equally as illiquid as a pension fund and thus the quantum of the utility adjustment could perhaps be very small.
- By contrast, if the non-pension capital being offered is cash which is superfluous to needs, then the quantum of any adjustment could be significantly greater.

G.11. PAG discusses adjustments in respect of utility in some detail in Paragraphs 7.37–7.43 in the revised report. The key observations are as shown below (emphasis as per PAG Report itself):

- “Unlike tax adjustments, adjustment for utility is **not a matter on which the PODE should be expected to comment...**” (Para 7.38);
- “It is impossible to come up with a ‘rule of thumb’ formula which may assist parties with how they might apply a utility adjustment; much will depend on the facts of the case. Indeed, in some cases it may be appropriate to **make no further adjustment.**” (Para 7.40);
- “[PAG’s] anecdotal observation is that in many cases pensions appear to have been **excessively adjusted** for perceived utility” (Para 7.41 (g)); and
- “Dependent on the facts of each case a range of 0%–25% could potentially be argued to be appropriate as a further adjustment to pension values for offsetting purposes where the application of a utility adjustment is considered justified on the facts of the case.” (Para 7.42).

Partial offsetting

G.12. Partial offsetting is a remedy whereby pension sharing is combined with offsetting by means of non-pension capital.

G.13. In particular, the parties may agree to some non-equal distribution of non-pension assets—typically in favour of the party with the lesser pension assets—with it being understood that a Pension Sharing Order (PSO) is still required to make up a remaining difference in rights thereafter.

G.14. Where offsetting is to be combined with the sharing of solely defined contribution pension

funds, it is possible to consider this on a “pound-for-pound” basis, but subject to adjustments for tax and utility as per this Section.

G.15. For example, if it is agreed that W need receive £200k from H by means of offset—such that she then has £400k more than him in non-pension assets—then it would be possible to substitute some of this £200k that he is to provide by using his defined contribution funds⁹. However, it must again be remembered that £200k of a pension credit may be deemed to be *less valuable* than £200k in non-pension assets for reasons of tax / utility, and it may be appropriate to make an adjustment in respect thereof.

G.16. Partial offsetting solutions are complicated where the PSO concerned relates to a defined benefit pension scheme, and under such circumstances the input of a PODE will prove invaluable. This becomes especially true when multiple PSOs are considered, and some judgement need be applied as to which should be reduced first by the presence of non-pension capital.

Conclusions and further considerations

G.17. In bringing together the above, we note that the Family Justice Council (FJC) “Needs” paper for Litigants in Person¹⁰ suggests that perhaps an adjustment of between 20 and 40% need be made for tax and utility. PAG proposes that the adjustment should be broken down and proposes that adjustment for tax alone should be between 15% and 30% (as stated above), dependent upon whether the member is expected to pay tax at current basic or higher rates.

G.18. In addition, there **may** be an adjustment for utility—based on the specific facts of the case—of between 0% and 25%¹¹. Therefore, PAG’s view is that the overall adjustment for both tax and utility could be between 15% and 55%.

⁹ Refer again to what is stated in Paragraph F.2 of this document.

¹⁰ To be found at <https://www.judiciary.gov.uk/related-offices-and-bodies/advisory-bodies/fjc/guidance/sorting-out-finances-on-divorce/>.

¹¹ The factors which PAG suggest may be considered when considering the utility discount, are set out on pages 50–51 of the revised PAG2 report, but very firmly concludes that the adjustment for utility should remain within the discretion of the Court using S. 25 factors.

G.19. It should also be borne in mind that the adjustments for tax / utility may potentially vary between the parties. For example, if one party has a defined contribution fund very close to retirement and the other party has a defined benefit pension with a long period to retirement, any such adjustment for utility may be different for one party.

G.20. The above explanation of offsetting is a distillation of a very complex thought process. Full details of this thought process and associated considerations can be found in the PAG Report, itself.

Examples of possible tax adjustments

G.21. In Example 1, it was shown that Wilma need retain £114k more in non-pension capital by way of offset on the incomes measure, with this becoming £140k on the capital measure (amounts rounded to nearest £1,000).

G.22. Given that these pension rights remain uncrystallised (i.e. they are deferred pensions yet to be taken), a tax adjustment of 15% may be deemed applicable, such that these amounts then become **£97k** and **£119k** respectively (again, amounts rounded to nearest £1,000).

G.23. In Example 2, the pensions in question were deemed to be in payment, with any tax-free amounts having already been taken. Under such circumstances, the amount that Wendy need retain might instead be made subject to a 20% tax adjustment, such that the incomes figure of £300k reduces to **£240k**, and the capital figure of £209k becomes **£167k** (again, amounts rounded to nearest £1,000).

SECTION H THE AUTHORS' CURRICULA VITAE

Jonathan Galbraith BSc (Hons) FIA MEWI

I am an experienced pensions actuary, having been working in the UK pensions industry since 2004. I joined Mathieson Consulting in 2017, and in October 2022 I was appointed as Chief Executive Officer of the Firm.

I serve also as a Principal within the business, preparing and advising on Expert Witness reports in the areas of pensions on divorce, loss of pension rights on dismissal / injury, negligence (in respect of pensions on divorce) and Inheritance Act cases. I have advised in over 800 such cases and am therefore able to draw upon some considerable experience.

One of my pensions reports was used in a February 2020 divorce case, with explicit reference being made to the report by HHJ Hess in his anonymised written judgment (<https://www.bailii.org/ew/cases/EWFC/OJ/2020/B10.pdf>, paragraph 63 (ii)):

"It has been suggested by Mr Galbraith from Mathieson Consulting Limited, the PODE instructed in this case, in his report of 3rd July 2019...that (for reasons convincingly explained in detail by him which have been accepted by both parties, and which include a proper consideration of the Lifetime Allowance and Fixed Protection issues arising here) the appropriate equalisation age on the facts of this case is 60 (rather than the normal 65 or 67). I propose to adopt this recommendation."

My pensions report in a September 2021 case (<https://www.bailii.org/ew/cases/EWFC/OJ/2021/B63.html> for the judgment) is referred to in favourable terms by Mr Recorder Salter.

From June 2022 to January 2024, I served on "PAG2", being the reformed Pension Advisory Group that reviewed and updated the *Guide to the Treatment of Pensions on Divorce* i.e. the PAG Report. I was also invited to join the Ogden Working Party in 2024, being the inter-disciplinary group that maintains the Ogden Tables, used in the valuations of catastrophic losses.

In my earlier career, I worked as a corporate pensions advisor in respect of the risks that employers face in operating defined benefit schemes, drawing on considerable experience of performing individual member benefit calculations. I have historically served as a subject-matter expert in public / not-for-profit sector pension arrangements.

Employment history

2022–present	Chief Executive Officer, Mathieson Consulting
2019–present	Head of Product & Risk, Mathieson Consulting
2017–present	Senior Actuary and Report Writer, Mathieson Consulting
2006–2017	Corporate pensions actuary, PwC
2004–2006	Trainee pensions actuary, Hewitt Bacon & Woodrow (now Aon)

Qualifications and memberships

Fellow of the Institute & Faculty of Actuaries, qualified 2009
BSc (Hons) in Mathematics, Statistics and Accounting, First Class, University of Strathclyde, 2004
Member of the Expert Witness Institute, 2021–
Member of the Ogden Working Group, 2024–
Affiliate Member of the Institute of Mathematics and its Applications, 2021–
Associate Member of Resolution (formerly the Solicitors Family Law Association), 2019–
Fellow of the Royal Statistical Society, 2006–

Published articles

Galbraith J and Taylor R, "Scrumpping the crop of recent pension decisions", December [2020] Fam Law

Galbraith J, Goodwin C and Taylor R, "The Galbraith Tables: a New Chapter for Pension Offsetting on Divorce?", Spring 2022 Financial Remedies Journal

Galbraith J and Morris B, "Mind the gap—Part 1", May [2022] Fam Law

Galbraith J and Morris B, "Pensions on divorce—insight from the Pension Advisory Group", Lexis Nexis, January 2024

Chris Goodwin BSc (Hons) FIA

I am an experienced pensions actuary, having worked in the UK pensions industry for over 30 years.

I joined Mathieson Consulting in 2017, and I prepare and advise on Expert Witness reports in the area of pensions on divorce. I have written or peer-reviewed over 850 such cases.

Previously during my career, I have worked for both actuarial consultants and life assurance companies including Aon Hewitt, Zurich Financial Services and the Prudential.

I have served as a Scheme Actuary to a portfolio of occupational pension schemes and have advised clients on pension matters from a wide range of business sectors including financial services, banking, manufacturing, the motor trade and charities. I have also served as a trustee director for a portfolio of Small Self-Administered Schemes.

Whilst working for Zurich Financial Services, I was responsible for implementing the Pension Sharing on Divorce Regulations within the business and as a Scheme Actuary, I advised clients on how they should implement pension sharing orders. I have also provided actuarial tables and procedures to clients for transfer value calculations, including those required to calculate pension credits.

As well as being a qualified actuary, I also hold a Post Graduate Certificate in Education (PGCE) in respect of the teaching of mathematics and have taught economics to actuarial students at the Central University of Finance and Economics, Beijing.

Employment history

2022–present	Chief Actuary and Head of Report Writing, Mathieson Consulting
2017–present	Senior Actuary and Report Writer, Mathieson Consulting
2016–2017	Trainee Mathematics Teacher, University of Worcester
2013–2015	Director, Goodwin Actuarial Services
2006–2012	Senior Consultant, Aon Hewitt
2003–2006	Senior Business Development Manager, Prudential
1994–2003	Director of In-Retirement Product Development, Zurich Financial Services
1988–1994	Consultant, Bacon & Woodrow (now Aon)

Qualifications and memberships

PGCE in secondary level Mathematics with post 16 enhancement, 2017

Exempt approved authority to provide investment advice, 2007–2012

Scheme Actuary, 1997–2003 and 2007–2012

Fellow of the Institute & Faculty of Actuaries, qualified 1994

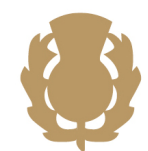
BSc (Hons) in Economics & Statistics, University of Southampton, 1988

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