A toolkit for assessing reform of public sector pensions

1. This note sets out a series of questions to help assess the recommendations of the Hutton Report on public service pensions (http://www.hm-treasury.gov.uk/indreview_johnhutton_pensions.htm) and proposed reforms of other pension schemes such as the Universities Superannuation Scheme.

Questions

2. HOW SAFE IS THE PENSION, i.e. who bears the risk? In a defined-benefit pension, the risks of financial market turbulence are borne by the employer and/or taxpayer. This is true both of final-salary and career-average schemes. In contrast, with a defined-contribution scheme (for example a system of individual accounts), the individual worker faces the risks of financial market turbulence. The move from final-salary to career-average pensions, since both are defined-benefit, continues to protect workers and pensioners from short-run financial turbulence.

3. A second aspect of safety is whether the pension system is sustainable over the long term as (loud cheers) people live longer healthy lives. A central purpose of pensions is as a long-term institution to enable people to redistribute from themselves during working years to themselves in retirement. Sustainability is therefore paramount to avoid sharp, short-run shocks. Changes to a pension system should take affect only gradually, not be introduced as an emergency response.

4. ARE ALL RIGHTS EARNED TO DATE FULLY PROTECTED? The Hutton Report proposes that all promises to date will be kept. Thus there will be little or no change for workers close to retirement. This is the right policy, given the importance of ensuring that changes are gradual and give workers a long time to adjust.

5. HOW MUCH CHOICE IS THERE OVER RETIREMENT? The Hutton Report rightly argues that if someone works for a year beyond normal retirement age, his or her pension will

- On workers, employers, and/or taxpayers through higher contributions.

These ways of paying for pensions can be used individually or in combination; there are no other ways of paying for pensions. It follows that if the aim is an unchanged pension at an unchanged retirement age with no additional contributions by workers, the costs have to fall on employers or taxpayers. As life expectancy rises, those costs rise. As discussed, this is not sustainable. The right policy aim is to optimise across all these instruments so as to provide good pensions without contributions rising so much that employers or workers opt out.

8. HOW LARGE IS THE PENSION: INDEXATION? A critical condition (and something worth manning the barricades to protect) is that the calculation of a person's career-average pension should be based on his or her record of earnings indexed each year to earnings not prices, so as to ensure that the pension a worker gets when he or she retires bears a clear relation to earlier real earnings. One way of doing so is to record a person's earnings each year as a fraction or multiple of average earnings in that year. The Hutton Report is right to recommend earnings indexation during working years, both for active and deferred members. Price indexation of a person's contributions record during working life will not provide adequate consumption smoothing (and capped price indexation still less); as a result, pensions will fail to achieve one of their fundamental purposes.

9. HOW LARGE IS THE PENSION: THE ACCRUAL RATE? A second critical element in determining the size of a person's pension is how the translation from final salary to career-average is calibrated, discussed in more detail in the Appendix. To illustrate, consider someone with 40 years' service whose final salary is 200 and career-average earnings 100, with an accrual rate of 1/80 per year of service. His final-salary pension would be 40/80 of 200, i.e. 100.

- If the accrual rate remains unchanged, his career-average pension would be 40/80 of 100, i.e. 50, or half of his final-salary pension.
- In contrast, if the accrual rate were raised to 1/40 of career-average earnings per year of service, his pension would be 40/40 of 100, i.e. 100, fully protecting his pension.

10. The calibration question is whether the move from final-salary to career-average pensions should be accompanied by a change in the accrual rate from 1/80 to 1/40, or to somewhere in betweeg 1 T0er-aveo40, or to

12. I am not advocating any particular approach, but arguing that discussion of reform should consider all these elements.

Conclusions

13. FINAL SALARY VERSUS CAREER AVERAGE. In a final-salary scheme, contributions are broadly on the basis of career average but benefits are based on final salary. Thus there is a cross-subsidy from people whose earnings grow more slowly to those whose earnings grow rapidly later in their career. The former group tends to be those with lower earnings, the latter the high flyers. Thus on average, final-salary schemes redistribute from care workers to senior managers. It follows that, if indexation and calibration of accrual rates are done sensibly, the change from final-salary to career-average benefits is progressive.

14. THINGS TO FIGHT FOR. The following aspects of reform are the ones to fight for.

- Full protection of rights earned to date.
- Future benefits to be career average, not defined contribution.
- Career-average benefits to be based on earnings indexation of a person's earnings record, not price indexation.
- An accrual rate (e.g. 1/45 of career-average earnings per year of service) chosen to optimise across (a) size of pension, (b) age at which first payable and (c) cost of the pension.
- No precipitate increase in retirement age.
- Choice over retirement age, and over options for combining pension with part-time work.

Appendix: Calibrating accrual rates in final-salary and career-average pensions

Assumptions

1. The examples in the table below assume:
   - A 40-year career;
   - All earnings are in real terms. Thus the calculation of a person's career average revalues his/her earnings each year in line with changes in average earnings;
   - A person's pension is 1/80 of the relevant earnings base per year of service.

Examples

2. Case 1: no earnings growth. Career-average earnings are 100; final salary is 100. In both cases, the pension is 40/80 of 100, i.e. 50.

3. Case 2: real earnings grow by 2% per year. The figures in the table are normalised so that career-average earnings remain 100. Thus the career-average pension remains at 50; the final-salary pension is 40/80 of 143.36 = 71.68.

4. Case 3: real earnings grow by 4.209% per year. Again the figures are normalised to keep career-average earnings at 100. The earnings growth rate of 4.209% is chosen because it leads to a final salary of 200 after 40 years, making the arithmetic simple. Thus the career-average pension remains at 50; the final-salary pension is 40/80 of 200 = 100.

Conclusions

5. If real earnings stay constant there is no difference between career-average and final-salary pensions.

6. With positive real earnings growth, a person's final salary will be higher than his/her career average. It follows that with a constant $1/80^{th}$ rule, a pension based on career-average earnings will be lower than one based on final salary. The reduction is greater the higher the rate of earnings growth: with 2% earnings growth, the move reduces a person's pension from 71.68 to 50; with 4.029% earnings growth the reduction is from 100 to 50.

7. If the aim is to ensure that the move to career average leaves a person's pension unaffected, each year of service has to accrue pension at more than $1/80^{th}$. With earnings growth of 4.209%, the person's final salary is 200; thus a career-average pension accruing at a rate of 1/40 would be same (100) as a final-salary pension based on the 1/80 rule.[1]

8. As noted in the main text, however, making sure that nobody loses from the change to career average is not necessarily the right objective. The accrual rate should be adjusted to take simultaneous account of the level of pension, the age from which it is paid, and the level of contributions necessary to finance the system.

[1] For a 40-year career, the fractional equivalent to $1/80^{th}$ is 1/k, where k = 40*E/P, where E = the person's career-average earnings and P = his/her final-salary pension.

Final salary and career-average pensions

	Real earnings growth		
Year	0%	2%	4.09%
1	100	66.22	40.06
2	100	67.55	41.75
3	100	68.90	43.51
4	100	70.28	45.34
5	100	71.68	47.24
6	100	73.12	49.23
7	100	74.58	51.31
8	100	76.07	53.47
9	100	77.59	55.72
10	100	79.14	58.06
11	100	80.73	60.50
12	100	82.34	63.05
13	100	83.99	65.70
14	100	85.67	68.47
15	100	87.38	71.35
16	100	89.13	74.36
17	100	90.91	77.49
18	100	92.73	80.75
19	100	94.58	84.15
20	100	96.47	87.69
21	100	98.40	91.38
22	100	100.37	95.22
23	100	102.38	99.23
24	100	104.43	103.41
25	100	106.52	107.76
26	100	108.65	112.30
27	100	110.82	117.02
28	100	113.04	121.95
29	100	115.30	127.08
30	100	117.60	132.43
31	100	119.95	138.00
32	100	122.35	143.81
33	100	124.80	149.87
34	100	127.30	156.17
35	100	129.84	162.75
36	100	132.44	169.60
37	100	135.09	176.74
38	100	137.79	184.17
39	100	140.54	191.93
40	100	143.36	200.00
Average salary	100	100.00	100.00
Final salary	100	143.36	200.00
Career average pension	50	50.00	50.00
Final salary pension	50	71.68	100.00
Accrual rate to ensure no losers		1/55.81	1/40