

The salary of the employee is a scaling factor that makes no difference to the results.  
 We assume a salary of \$100,000 in the first year of employment.  
 Solver is user to find the contribution rate (cell I5) that leads to zero final balance (cell H30)

Salary growth (real)	2.00%	Pension Contribution Rate
Investment Rate (real)	1.50%	
Pension (%) of final salary	70.00%	
Indexing shortfall	1.00%	

Working Life				Pension	
Year	Income	Pension Contrib	Value of Contrib	Year	Pension
1	1,00,000.00	25,022.21	25,022.21	46	1,67,303.72
2	1,02,000.00	25,522.66	50,920.20	47	1,65,630.68
3	1,04,040.00	26,033.11	77,717.11	48	1,63,974.38
4	1,06,120.80	26,553.77	1,05,436.64	49	1,62,334.63
5	1,08,243.22	27,084.85	1,34,103.04	50	1,60,711.29
6	1,10,408.08	27,626.54	1,63,741.13	51	1,59,104.17
7	1,12,616.24	28,179.08	1,94,376.32	52	1,57,513.13
8	1,14,868.57	28,742.66	2,26,034.62	53	1,55,938.00
9	1,17,165.94	29,317.51	2,58,742.65	54	1,54,378.62
10	1,19,509.26	29,903.86	2,92,527.65	55	1,52,834.83
11	1,21,899.44	30,501.94	3,27,417.50	56	1,51,306.49
12	1,24,337.43	31,111.98	3,63,440.74	57	1,49,793.42
13	1,26,824.18	31,734.22	4,00,626.57	58	1,48,295.49
14	1,29,360.66	32,368.90	4,39,004.87	59	1,46,812.53
15	1,31,947.88	33,016.28	4,78,606.22	60	1,45,344.41
16	1,34,586.83	33,676.60	5,19,461.91	61	1,43,890.96
17	1,37,278.57	34,350.14	5,61,603.98	62	1,42,452.05
18	1,40,024.14	35,037.14	6,05,065.18	63	1,41,027.53
19	1,42,824.62	35,737.88	6,49,879.03		
20	1,45,681.12	36,452.64	6,96,079.86		
21	1,48,594.74	37,181.69	7,43,702.75		
22	1,51,566.63	37,925.32	7,92,783.61		
23	1,54,597.97	38,683.83	8,43,359.20		
24	1,57,689.93	39,457.51	8,95,467.10		
25	1,60,843.72	40,246.66	9,49,145.76		
26	1,64,060.60	41,051.59	10,04,434.54		
27	1,67,341.81	41,872.62	10,61,373.68		
28	1,70,688.65	42,710.08	11,20,004.36		
29	1,74,102.42	43,564.28	11,80,368.70		
30	1,77,584.47	44,435.56	12,42,509.80		
31	1,81,136.16	45,324.27	13,06,471.72		
32	1,84,758.88	46,230.76	13,72,299.55		
33	1,88,454.06	47,155.37	14,40,039.42		
34	1,92,223.14	48,098.48	15,09,738.49		

35	1,96,067.60	49,060.45	15,81,445.02
36	1,99,988.96	50,041.66	16,55,208.36
37	2,03,988.73	51,042.49	17,31,078.98
38	2,08,068.51	52,063.34	18,09,108.51
39	2,12,229.88	53,104.61	18,89,349.75
40	2,16,474.48	54,166.70	19,71,856.69
41	2,20,803.97	55,250.04	20,56,684.58
42	2,25,220.05	56,355.04	21,43,889.89
43	2,29,724.45	57,482.14	22,33,530.38
44	2,34,318.94	58,631.78	23,25,665.11
45	2,39,005.31	59,804.42	24,20,354.51



25.02%

Value

24,20,354.51  
22,89,356.10  
21,58,065.76  
20,26,462.37  
18,94,524.68  
17,62,231.26  
16,29,560.56  
14,96,490.83  
13,63,000.20  
12,29,066.58  
10,94,667.74  
9,59,781.28  
8,24,384.57  
6,88,454.86  
5,51,969.15  
4,14,904.28  
2,77,236.88  
1,38,943.38  
0.00

Age	Prob of Death Within 1 year	Probability of Death for a man aged 60	Principal	Int Rate
60	0.011197	Year 1	50,00,000	0.06
61	0.012009	Year 2		
62	0.012867	Year 3		

PV of Expected Payout

Time	Exp Cash Flow	PV
0.5	55,985.00	54,354.37
1.5	59,372.68	54,334.41
2.5	62,850.69	54,215.56
Total		1,62,904.34
	Premium	58,179.50

PV of Expected Cash Inflow per \$1 of premium

Time	Cash Flow	PV
0	1	1
1	0.988803	0.932042
2	0.976928	0.867988
Total		2.80003