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Covid-19 and pension saving: The impact of missing contributions

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Covid-19 and Pension Saving: The Impact of Missing Contributions

Introduction

Employees who are laid off temporarily or their role made redundant not only lose income for immediate consumption, they also lose the value of contributions for their pension during the time that no salary is paid. The furlough scheme has provided some respite for immediate income needs, which might then also provide capacity for long term saving. However, with the end of the furlough scheme, potential future redundancy and/or the reduced capacity to save for the long term will be significant matters for concern.

For those who are furloughed (laid off temporarily), the period during which pension contributions are missed may be as short as the initial period of furlough or potentially for as long as the extended period (currently about a year).

For those made redundant, the period of missed contributions will depend on how long it takes to secure new employment. Moreover, there is the potential for returnees to opt-out of auto-enrolment having been scarred by the earlier experience of being unemployed, as their focus may have changed to the near term at the expense of long term planning.

What financial impact does this have?

The results of the modelling below suggest that, unsurprisingly, the impact will vary depending on age, the period during which contributions are missed, and the various future economic conditions. The upside is that on reasonable assumptions, and allowing for some sensitivity margins, the resolution by way of additional future contributions could be manageable if action is taken immediately upon returning to work.

Model

The following analysis initially focuses on UK auto-enrolment level contributions. This does not address whether the current level of auto-enrolment contributions is sufficient to support income in retirement. Rather the analysis assesses the magnitude of the lost accumulated fund value due to missing contributions and the amount of additional contributions necessary to replenish the employee's retirement fund such that the fund is the same as if the contributions had not been missed.

Parameters and assumptions

- Age at entry is taken to be 22, the minimum age for auto-enrolment
- Employer contributions = 3% of full salary
- Employee contributions = 5% of full salary
- Historic salary increases were 2.5% pa
- Historic investment returns were 5% pa net of expenses
- Contributions are assumed to restart at the same levels (subject to inflation adjustment) upon re-joining the work-force
- The employee is assumed to rejoin the work force in a job of similar value to that prior to being laid-off/furloughed, i.e. on a salary increased by inflation since ceasing work
- The investment strategy after recommencing contributions is the same as before
- The investment strategy includes a derisking period of 10 years prior to retirement age during which the net investment return is 3.5% pa
- The employee is assumed to retire at age 68
- We model based on a salary of £ 25,000 pa for illustration purposes, although since we are not modelling any limits on auto-enrolment contributions, the conclusions here do not depend on the current salary

Results

Two main outputs of the analysis are:

- The percentage reduction in fund value due to missed contributions
- The required future contribution rate to bridge the gap (so-called catch-up contributions)

The following table shows the amount by which the retiree will find their fund value short due to missing contributions based on the core assumptions above:

Shortfall versus actual fund value						
Missing periods (years)		1	2	3	4	5
Ages now	25	3.4%	6.9%	10.6%	14.5%	18.5%
	30	3.0%	6.1%	9.3%	12.6%	16.1%
	35	2.6%	5.4%	8.2%	11.0%	14.0%
	40	2.3%	4.7%	7.2%	9.7%	12.2%
	45	2.1%	4.2%	6.3%	8.5%	10.7%
	50	1.8%	3.7%	5.5%	7.4%	9.3%
	55	1.6%	3.2%	4.9%	6.5%	8.2%

This shows that a 25 year old will find that if they miss one year of contributions, their pension pot at age 68 will be 3.4% lower than if they had not missed the contributions. Or to put it another way, the pot needs to be increased by 3.4% to reach the value they would have had with a full record of contributions. If they miss 5 years of contributions they will need to top up their pot by 18.5% at age 68.

The impact naturally is greatest for the long periods of missing contributions, and younger employees are affected to a greater extent due to the impact of lost investment returns over longer periods.

In the next table is the rate of contributions to rectify the shortfalls in the above table.

Catch-up contributions (from each of employer and employee)						
Missing periods (years)		1	2	3	4	5
Ages now	25	0.2%	0.3%	0.5%	0.7%	0.8%
	30	0.2%	0.3%	0.5%	0.7%	0.9%
	35	0.2%	0.4%	0.6%	0.8%	1.0%
	40	0.2%	0.4%	0.6%	0.9%	1.2%
	45	0.2%	0.5%	0.8%	1.1%	1.4%
	50	0.3%	0.6%	0.9%	1.3%	1.8%
	55	0.4%	0.8%	1.3%	1.9%	2.7%

The assumption here is that upon returning to work the employee enhances their auto-enrolment contributions by the amounts specified in the table. Note that these contributions need to be paid from the start of returning to work until retirement age. The oldest employees have a shorter period over which those contributions are paid. The “catch-up” contributions therefore need to be higher to compensate for the shortfall, notwithstanding that the shortfall for older employees might be a lower proportion of their fund value.

The appendix shows sensitivities of these results to changes in the inflation and investment returns assumptions.

Conclusions

The key message is that employees and employers should be encouraged to make an early start on a small upward adjustment to regular contributions with, what might be termed, “COVID catch-up contributions (CCCs)”. These CCCs may not actually be beyond reach for the majority.

There are parallel issues for anyone stepping out of the workforce and missing contributions before returning to work. The scenario of a temporary furlough or a redundancy period can be replaced by temporary illness, sabbaticals, maternity/paternity leave, etc.

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Appendix 1

Shortfall of fund value at retirement as a percentage of the actual fund value

The results vary but not materially with changes in the inflation and interest rates (within +/- ½% sensitivity tests).

Current salary:	£ 25,000	Inflation	2.0%	Returns	4.5%
Missing periods	1	2	3	4	5
25	3.4%	6.9%	10.6%	14.5%	18.5%
30	3.0%	6.1%	9.3%	12.6%	16.1%
35	2.6%	5.4%	8.2%	11.0%	14.0%
40	2.3%	4.7%	7.2%	9.7%	12.2%
45	2.1%	4.2%	6.3%	8.5%	10.7%
50	1.8%	3.7%	5.5%	7.4%	9.3%
55	1.6%	3.2%	4.9%	6.5%	8.2%

Current salary:	£ 25,000	Inflation	2.5%	Returns	4.5%
Missing periods	1	2	3	4	5
25	3.1%	6.4%	9.8%	13.4%	17.1%
30	2.8%	5.8%	8.8%	12.0%	15.3%
35	2.6%	5.2%	7.9%	10.8%	13.7%
40	2.3%	4.7%	7.2%	9.7%	12.3%
45	2.1%	4.3%	6.5%	8.7%	11.0%
50	1.9%	3.8%	5.8%	7.8%	9.9%
55	1.7%	3.5%	5.3%	7.1%	9.0%

Current salary:	£ 25,000	Inflation	3.0%	Returns	4.5%
Missing periods	1	2	3	4	5
25	2.9%	5.9%	9.0%	12.3%	15.7%
30	2.7%	5.4%	8.3%	11.3%	14.5%
35	2.5%	5.0%	7.7%	10.5%	13.3%
40	2.3%	4.7%	7.1%	9.7%	12.3%
45	2.1%	4.3%	6.6%	8.9%	11.3%
50	2.0%	4.0%	6.1%	8.3%	10.5%
55	1.8%	3.7%	5.7%	7.6%	9.7%

Current salary:	£ 25,000	Inflation	2.0%	Returns	5.0%
Missing periods	1	2	3	4	5
25	3.7%	7.5%	11.5%	15.6%	20.0%
30	3.1%	6.4%	9.8%	13.2%	16.8%
35	2.7%	5.5%	8.3%	11.2%	14.2%
40	2.3%	4.7%	7.1%	9.6%	12.1%
45	2.0%	4.1%	6.1%	8.2%	10.3%
50	1.7%	3.5%	5.2%	7.0%	8.8%
55	1.5%	3.0%	4.5%	6.0%	7.5%

Current salary:	£ 25,000	Inflation	2.5%	Returns	5.0%
Missing periods	**1**	**2**	**3**	**4**	**5**
25	**3.4%**	**6.9%**	**10.6%**	**14.5%**	**18.5%**
30	**3.0%**	**6.1%**	**9.3%**	**12.6%**	**16.1%**
35	**2.6%**	**5.4%**	**8.2%**	**11.0%**	**14.0%**
40	**2.3%**	**4.7%**	**7.2%**	**9.7%**	**12.2%**
45	**2.1%**	**4.2%**	**6.3%**	**8.5%**	**10.7%**
50	**1.8%**	**3.7%**	**5.5%**	**7.4%**	**9.3%**
55	**1.6%**	**3.2%**	**4.9%**	**6.5%**	**8.2%**

Current salary:	£ 25,000	Inflation	3.0%	Returns	5.0%
Missing periods	1	2	3	4	5
25	3.1%	6.4%	9.8%	13.3%	17.1%
30	2.8%	5.8%	8.8%	12.0%	15.3%
35	2.6%	5.2%	7.9%	10.8%	13.7%
40	2.3%	4.7%	7.2%	9.7%	12.3%
45	2.1%	4.3%	6.5%	8.7%	11.0%
50	1.9%	3.9%	5.8%	7.9%	9.9%
55	1.7%	3.5%	5.3%	7.1%	9.0%

Current salary:	£ 25,000	Inflation	2.0%	Returns	5.5%
Missing periods	1	2	3	4	5
25	3.9%	8.0%	12.3%	16.8%	21.5%
30	3.3%	6.7%	10.2%	13.8%	17.5%
35	2.8%	5.6%	8.5%	11.4%	14.4%
40	2.3%	4.7%	7.1%	9.5%	11.9%
45	2.0%	3.9%	5.9%	7.9%	9.9%
50	1.7%	3.3%	4.9%	6.6%	8.2%
55	1.4%	2.8%	4.1%	5.5%	6.9%

Current salary:	£ 25,000	Inflation	2.5%	Returns	5.5%
Missing periods	1	2	3	4	5
25	3.6%	7.5%	11.4%	15.6%	19.9%
30	3.1%	6.4%	9.7%	13.2%	16.8%
35	2.7%	5.5%	8.3%	11.2%	14.2%
40	2.3%	4.7%	7.1%	9.6%	12.1%
45	2.0%	4.1%	6.1%	8.2%	10.3%
50	1.7%	3.5%	5.2%	7.0%	8.8%
55	1.5%	3.0%	4.5%	6.0%	7.6%

Current salary:	£ 25,000	Inflation	3.0%	Returns	5.5%
Missing periods	1	2	3	4	5
25	3.4%	6.9%	10.6%	14.4%	18.5%
30	3.0%	6.1%	9.3%	12.6%	16.0%
35	2.6%	5.4%	8.1%	11.0%	14.0%
40	2.3%	4.7%	7.2%	9.7%	12.2%
45	2.1%	4.2%	6.3%	8.5%	10.7%
50	1.8%	3.7%	5.5%	7.4%	9.4%
55	1.6%	3.2%	4.9%	6.6%	8.3%

Appendix 2

Fund after paying additional 1.2% contributions (0.6% by employer and 0.6% by employee) as a proportion of fund if original contributions were paid and none missed

Current salary:	£ 25,000	Inflation	2.0%	Returns	4.5%
Missing periods	1	2	3	4	5
25	109.7%	106.0%	102.4%	98.9%	95.5%
30	107.8%	104.5%	101.3%	98.2%	95.2%
35	106.1%	103.2%	100.4%	97.6%	94.9%
40	104.6%	102.0%	99.5%	97.1%	94.7%
45	103.2%	101.0%	98.7%	96.6%	94.5%
50	102.1%	100.0%	98.1%	96.2%	94.3%
55	101.0%	99.2%	97.5%	95.8%	94.1%

Current salary:	£ 25,000	Inflation	2.5%	Returns	4.5%
Missing periods	1	2	3	4	5
25	110.1%	106.7%	103.3%	100.0%	96.8%
30	108.2%	105.1%	102.1%	99.1%	96.1%
35	106.5%	103.7%	100.9%	98.2%	95.6%
40	105.0%	102.4%	99.9%	97.5%	95.0%
45	103.6%	101.3%	99.0%	96.7%	94.6%
50	102.3%	100.2%	98.1%	96.1%	94.1%
55	101.2%	99.2%	97.4%	95.5%	93.7%

Current salary:	£ 25,000	Inflation	3.0%	Returns	4.5%
Missing periods	1	2	3	4	5
25	110.5%	107.3%	104.2%	101.1%	98.1%
30	108.7%	105.7%	102.8%	100.0%	97.1%
35	107.0%	104.2%	101.5%	98.9%	96.3%
40	105.4%	102.9%	100.4%	97.9%	95.4%
45	104.0%	101.6%	99.3%	96.9%	94.7%
50	102.6%	100.4%	98.2%	96.1%	94.0%
55	101.3%	99.3%	97.3%	95.3%	93.2%

Current salary:	£ 25,000	Inflation	2.0%	Returns	5.0%
Missing periods	1	2	3	4	5
25	109.3%	105.3%	101.5%	97.8%	94.2%
30	107.3%	103.9%	100.6%	97.4%	94.3%
35	105.6%	102.7%	99.8%	97.0%	94.3%
40	104.2%	101.6%	99.1%	96.7%	94.4%
45	102.9%	100.7%	98.6%	96.5%	94.4%
50	101.8%	99.9%	98.0%	96.2%	94.5%
55	100.9%	99.2%	97.6%	96.0%	94.5%

Current salary:	£ 25,000	Inflation	2.5%	Returns	5.0%
Missing periods	**1**	**2**	**3**	**4**	**5**
25	**109.7%**	**106.0%**	**102.4%**	**98.9%**	**95.5%**
30	**107.8%**	**104.5%**	**101.3%**	**98.2%**	**95.2%**
35	**106.1%**	**103.2%**	**100.4%**	**97.6%**	**94.9%**
40	**104.6%**	**102.0%**	**99.5%**	**97.1%**	**94.7%**
45	**103.2%**	**101.0%**	**98.8%**	**96.6%**	**94.5%**
50	**102.1%**	**100.0%**	**98.1%**	**96.2%**	**94.3%**
55	**101.0%**	**99.2%**	**97.5%**	**95.8%**	**94.1%**

Current salary:	£ 25,000	Inflation	3.0%	Returns	5.0%
Missing periods	1	2	3	4	5
25	110.1%	106.7%	103.3%	100.0%	96.8%
30	108.2%	105.1%	102.1%	99.1%	96.2%
35	106.5%	103.7%	101.0%	98.2%	95.6%
40	105.0%	102.4%	99.9%	97.5%	95.0%
45	103.6%	101.3%	99.0%	96.7%	94.6%
50	102.3%	100.2%	98.1%	96.1%	94.1%
55	101.2%	99.2%	97.4%	95.5%	93.7%

Current salary:	£ 25,000	Inflation	2.0%	Returns	5.5%
Missing periods	1	2	3	4	5
25	108.8%	104.6%	100.6%	96.7%	92.9%
30	106.9%	103.3%	99.9%	96.6%	93.4%
35	105.2%	102.2%	99.3%	96.5%	93.8%
40	103.8%	101.3%	98.8%	96.4%	94.2%
45	102.6%	100.5%	98.4%	96.4%	94.5%
50	101.6%	99.8%	98.0%	96.3%	94.7%
55	100.7%	99.2%	97.7%	96.3%	94.9%

Current salary:	£ 25,000	Inflation	2.5%	Returns	5.5%
Missing periods	1	2	3	4	5
25	109.3%	105.3%	101.5%	97.8%	94.2%
30	107.3%	103.9%	100.6%	97.4%	94.3%
35	105.6%	102.7%	99.8%	97.0%	94.3%
40	104.2%	101.6%	99.1%	96.7%	94.4%
45	102.9%	100.7%	98.6%	96.5%	94.4%
50	101.8%	99.9%	98.0%	96.2%	94.5%
55	100.9%	99.2%	97.6%	96.0%	94.5%

Current salary:	£ 25,000	Inflation	3.0%	Returns	5.5%
Missing periods	1	2	3	4	5
25	109.7%	106.0%	102.4%	98.9%	95.5%
30	107.8%	104.5%	101.4%	98.2%	95.2%
35	106.1%	103.2%	100.4%	97.6%	94.9%
40	104.6%	102.0%	99.5%	97.1%	94.7%
45	103.2%	101.0%	98.8%	96.6%	94.5%
50	102.1%	100.0%	98.1%	96.2%	94.3%
55	101.0%	99.2%	97.5%	95.8%	94.1%

Under the core assumptions 0.6% paid by employer and employee rectifies the position for a 40 year old who has missed 3 years of contributions.

Appendix 3

Contribution rate required by employer and employee to rectify the missed contributions

Current salary:	£ 25,000	Inflation	2.0%	Returns	4.5%
Missing periods	1	2	3	4	5
25	0.2%	0.3%	0.5%	0.7%	0.8%
30	0.2%	0.3%	0.5%	0.7%	0.9%
35	0.2%	0.4%	0.6%	0.8%	1.0%
40	0.2%	0.4%	0.6%	0.9%	1.2%
45	0.2%	0.5%	0.8%	1.1%	1.4%
50	0.3%	0.6%	0.9%	1.3%	1.8%
55	0.4%	0.8%	1.3%	1.9%	2.7%

Current salary:	£ 25,000	Inflation	2.5%	Returns	4.5%
Missing periods	1	2	3	4	5
25	0.1%	0.3%	0.4%	0.6%	0.8%
30	0.2%	0.3%	0.5%	0.7%	0.8%
35	0.2%	0.3%	0.5%	0.7%	1.0%
40	0.2%	0.4%	0.6%	0.8%	1.1%
45	0.2%	0.5%	0.7%	1.0%	1.3%
50	0.3%	0.6%	0.9%	1.3%	1.7%
55	0.4%	0.8%	1.3%	1.9%	2.6%

Current salary:	£ 25,000	Inflation	3.0%	Returns	4.5%
Missing periods	1	2	3	4	5
25	0.1%	0.3%	0.4%	0.5%	0.7%
30	0.1%	0.3%	0.4%	0.6%	0.8%
35	0.2%	0.3%	0.5%	0.7%	0.9%
40	0.2%	0.4%	0.6%	0.8%	1.0%
45	0.2%	0.4%	0.7%	1.0%	1.3%
50	0.3%	0.5%	0.9%	1.2%	1.7%
55	0.3%	0.7%	1.2%	1.8%	2.5%

Current salary:	£ 25,000	Inflation	2.0%	Returns	5.0%
Missing periods	1	2	3	4	5
25	0.2%	0.3%	0.5%	0.7%	0.9%
30	0.2%	0.4%	0.6%	0.8%	1.0%
35	0.2%	0.4%	0.6%	0.8%	1.1%
40	0.2%	0.4%	0.7%	1.0%	1.3%
45	0.2%	0.5%	0.8%	1.1%	1.5%
50	0.3%	0.6%	1.0%	1.4%	1.9%
55	0.4%	0.8%	1.3%	2.0%	2.8%

Current salary:	£ 25,000	Inflation	2.5%	Returns	5.0%
Missing periods	1	2	3	4	5
25	0.2%	0.3%	0.5%	0.7%	0.8%
30	0.2%	0.3%	0.5%	0.7%	0.9%
35	0.2%	0.4%	0.6%	0.8%	1.0%
40	0.2%	0.4%	0.6%	0.9%	1.2%
45	0.2%	0.5%	0.8%	1.1%	1.4%
50	0.3%	0.6%	0.9%	1.3%	1.8%
55	0.4%	0.8%	1.3%	1.9%	2.7%

Current salary:	£ 25,000	Inflation	3.0%	Returns	5.0%
Missing periods	1	2	3	4	5
25	0.1%	0.3%	0.4%	0.6%	0.8%
30	0.2%	0.3%	0.5%	0.7%	0.8%
35	0.2%	0.3%	0.5%	0.7%	0.9%
40	0.2%	0.4%	0.6%	0.8%	1.1%
45	0.2%	0.5%	0.7%	1.0%	1.3%
50	0.3%	0.6%	0.9%	1.3%	1.7%
55	0.4%	0.8%	1.3%	1.9%	2.6%

Current salary:	£ 25,000	Inflation	2.0%	Returns	5.5%
Missing periods	1	2	3	4	5
25	0.2%	0.4%	0.6%	0.8%	1.0%
30	0.2%	0.4%	0.6%	0.8%	1.1%
35	0.2%	0.4%	0.7%	0.9%	1.2%
40	0.2%	0.5%	0.7%	1.0%	1.3%
45	0.3%	0.5%	0.8%	1.2%	1.6%
50	0.3%	0.6%	1.0%	1.5%	2.0%
55	0.4%	0.8%	1.4%	2.0%	2.9%

Current salary:	£ 25,000	Inflation	2.5%	Returns	5.5%
Missing periods	1	2	3	4	5
25	0.2%	0.3%	0.5%	0.7%	0.9%
30	0.2%	0.4%	0.6%	0.8%	1.0%
35	0.2%	0.4%	0.6%	0.8%	1.1%
40	0.2%	0.4%	0.7%	1.0%	1.2%
45	0.2%	0.5%	0.8%	1.1%	1.5%
50	0.3%	0.6%	1.0%	1.4%	1.9%
55	0.4%	0.8%	1.3%	2.0%	2.8%

Current salary:	£ 25,000	Inflation	3.0%	Returns	5.5%
Missing periods	1	2	3	4	5
25	0.2%	0.3%	0.5%	0.7%	0.8%
30	0.2%	0.3%	0.5%	0.7%	0.9%
35	0.2%	0.4%	0.6%	0.8%	1.0%
40	0.2%	0.4%	0.6%	0.9%	1.2%
45	0.2%	0.5%	0.8%	1.1%	1.4%
50	0.3%	0.6%	0.9%	1.3%	1.8%
55	0.4%	0.8%	1.3%	1.9%	2.7%

The necessary contributions vary between 0.2% and 2.9% of salary depending on age and the duration of missed contributions. It is marginally affected by the inflation and investment return assumptions.

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