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# Pensions and retirement

What do different pensions mean for when people retire?

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## Overview

The last twenty-five years have seen a shift in private pension provision from DB to DC pensions

- particularly for men
- particularly for younger workers

What does this mean for the timing of retirement?

- Economic incentives for retirement
- Some wider issues

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## Key messages

Raising the state pension age is not the (whole) solution to later retirement. Most people currently retire before this age; private pensions matter more.

Retirement incentives in DB and DC pensions are different. DC pensions have a flatter accrual profile – less incentive to work in late 50s/ early 60s, but less incentive to retire after this age.

Annuitization reduces the incentive to delay retirement – delaying annuitization typically carries a penalty.

For a full picture, we need to know more about individual experience and perceptions of different pension arrangements and about employment of older workers more generally

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## Pensions commission

**Increasing longevity means:**

- lower pensions in retirement
- more saving when working
- later retirement

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## Past trend towards earlier retirement

| | Average age of exit from workforce | Life expectancy at age of exit from workforce | Percentage of adult life spent in retirement |
|---|---|---|---|
| 1950 | 67.2 | 10.8 | 18.0 |
| 1960 | 66.2 | 11.5 | 19.3 |
| 1970 | 65.4 | 12.5 | 20.9 |
| 1980 | 64.6 | 14.2 | 23.4 |
| 1990 | 63.5 | 17.2 | 27.4 |
| 1995 | 63.1 | 18.7 | 29.4 |
| 2000 | 63.3 | 19.8 | 30.5 |
| 2004 | 63.8 | 20.1 | 30.5 |

Source: Pensions Commission

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## Key drivers of early retirement

**A combination of:**

- Increasing wealth
- Macro-economic environment
- Availability of incapacity benefit
- Occupational pensions – increasing coverage, early retirement packages

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## Predicting the future

- Macro-economic environment
  - Supply of/ demand for older workers
- Incapacity benefit
  - (More) Government reforms
  - But, pension credit may provide an alternative early retirement vehicle at least until 2020
- Pensions
  - Effect of shift from DB to DC pensions

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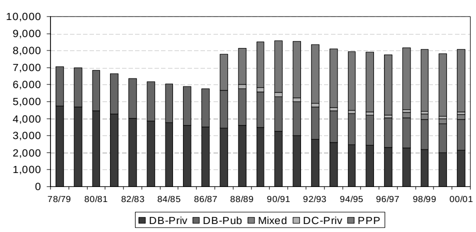
## Men with private second-tier pensions




Recent scheme closures will mean further fall in numbers with DB in the future

Source: DWP 1% sample of NI records

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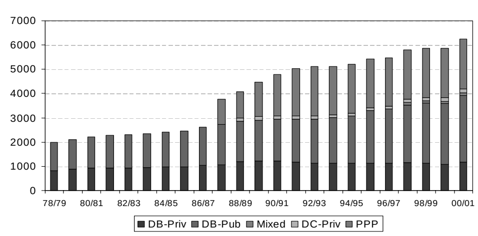
## Women with private second-tier pensions




Growth in number with public sector DB plan due to changing employment

Source: DWP 1% sample of NI records

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## What does this shift mean for retirement?

**Option value model – the decision to retire depends on:**

- pension wealth accrued to date (+)
- future pension accruals, i.e. how much can someone increase their pension wealth by carrying on working – not just in the next period, but in all future periods (-)
- potential future earnings (-)
- value of leisure (+)

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## DB/DC: incentives for retirement

**Accrual in a DB scheme**

- Increase pensionable service
- Increase final salary
- Lose pension income (past normal/ early retirement age)
- Adjustment for early retirement/deferral, if appropriate
- Probability of dying before pension is drawn

**Accrual in a DC scheme**

- Change in fund value
  - Contributions + return on accumulated fund
- Change in annuity rate – time and age
- Loss of annuity income
- Probability of dying before annuity is drawn

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## Empirical strategy

- Model values of pension wealth for representative individuals in a DB scheme and a DC scheme
- Compare incentives (wealth and accrual) for retirement at different ages
- Predict retirement probabilities
  - Blundell, Meghir and Smith (2002) estimated wealth and accrual effects using data from DWP Retirement Survey

* Health warning – this is very simplistic, but intended to highlight incentive effects *

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## Modelling DB wealth: Assumptions

- Scheme rules (based on NAPF survey):
  - Accrual rate = 1/80th (+ 3/80th lump sum)
  - Pensionable earnings = final year's salary
  - Normal pension age = 65 (also look at early retirement at 60 onto 100% pension/ reduced pension)
  - Pension uprated in line with inflation (2.5%)

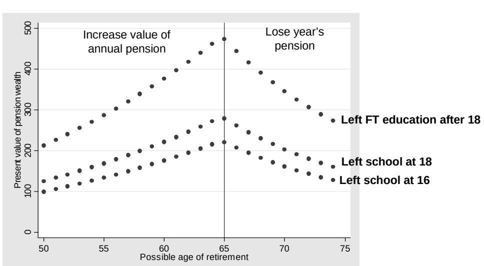


## Modelling DB wealth: Assumptions

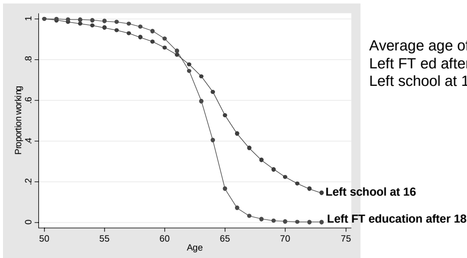
- Earnings profiles estimated for three education groups using data from the Family Expenditure Survey 1979 – 2002
- Individual assumed to be employed continuously from 25
- Value of pension wealth = lump sum + discounted, expected future pension income
  - 5% nominal discount rate
  - CMIB interim mortality rates for male pensioners
  - no survivor benefits



## PV expected pension wealth at different retirement ages
Male, aged 50
NPA = 65; no early retirement



## Predicted retirement profiles




Average age of retirement
Left FT ed after 18 = 63.6
Left school at 16 = 66.0

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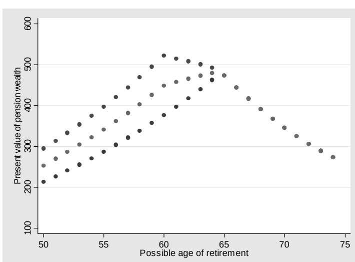
## PV expected pension wealth at different retirement ages
Male, aged 50, left FT education after 18
Early retirement schemes




o = no early retirement
o = early at 60, no reduction
o = early at 60, 4% reduction

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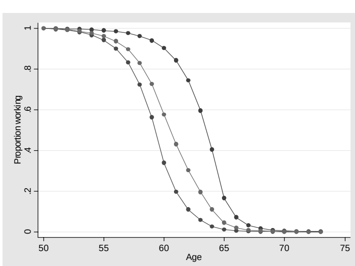
## Predicted retirement profiles




o = no early retirement
ave ret age = 63.6

o = early at 60, no reduction
ave ret age = 59.6

o = early at 60, 4% reduction
ave ret age = 61.0

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## Modelling DC wealth: assumptions

- Same earnings profiles & employment assumption
- Contributions
  1. Contracted out rebates
  2. Additional contributions, based on evidence from the British Household Panel Survey (average 6%, increasing with age)
- Rate of return
  1. constant 7%, minus 1 percentage point charges
  2. life-styling (7% until 50, reduced to 4% by 60)



## Replacement rate and estimated pension wealth ('000s) at age 65

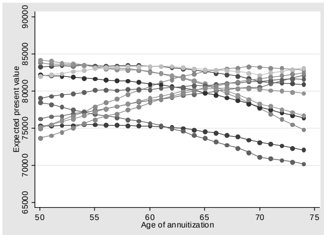
| | Left school at 16 | Left school at 18 | Left FT educ after 18 |
|---|---|---|---|
| DB | | | |
| Final Salary | 50%<br>£419 | 50%<br>£529 | 50%<br>£900 |
| DC (75% annuitization) | | | |
| 7% return | 59%<br>£462 | 55%<br>£554 | 46%<br>£777 |
| Lifestyling | 49%<br>£386 | 47%<br>£463 | 38%<br>£650 |



## DC pensions – accrual

- Change in fund value
  - Contributions + return on accumulated fund
- Change in annuity rate – time and age
- Loss of annuity income
- Probability of dying before annuity is drawn

## Expected annuity value – by provider




Calculations based on:

FSA annuity comparative table

£100,000 level annuity

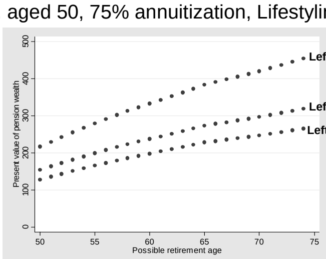
5% discount rate

CMIB interim mortality rates for pensioners

From the perspective of someone aged 50, the expected value of an annuity typically falls with delayed annuitisation



## PV expected pension wealth at different retirement ages
## Male, aged 50, 75% annuitization, Lifestyling investment



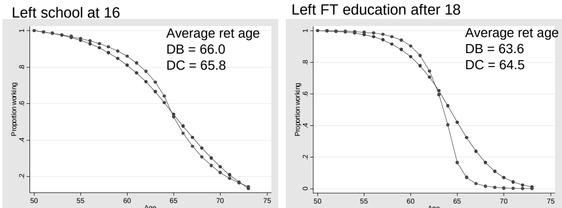

Compared to DB schemes, DC pensions have flatter wealth accrual profiles
Lower peak values before age 65; higher after age 65
Levels of pension wealth are higher/ lower depending on education



## Predicted retirement profiles – DB (o) and DC (o)

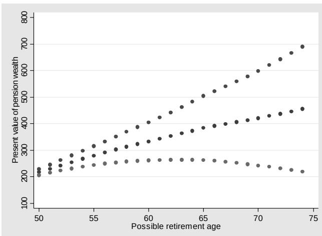
Left school at 16

Left FT education after 18




Compared to DB, DC pensions yield higher rates of retirement
in 50s & early 60s; lower after this age
Average retirement age is higher among better-educated

PV expected pension wealth at different retirement ages
Male, aged 50, college-educated, Lifestyling investment




o = 50% annuitisation

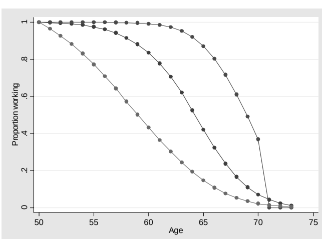
o = 75% annuitisation

o = 100% annuitisation

Annuitization reduces accrual values….



Predicted retirement probabilities




o = 50% annuitisation
average ret age = 68.7

o = 75% annuitisation
average ret age = 64.5

o = 100% annuitisation
average ret age = 59.8

… and this leads to earlier retirement



## Conclusions

- The changing pension landscape means different economic incentives for retirement
- DC pensions produce flatter retirement profiles, and (slightly) later average retirement, at least among those with steep earnings profiles
- Compulsory annuitization tends to reduce average retirement age compared to a reduced annuitization requirement
- This is, of course, only part of the story

## Conclusions

**We need to know more about**

- How people are investing DC pensions, and how they might be affected by stockmarket fluctuations near to retirement
- How people perceive funds in an individual retirement account versus an occupational pension, and the flexibility of different pension arrangements
- How wage profiles may be affected by the pension scheme in operation, and how they might change in the future
- Employment of older workers

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