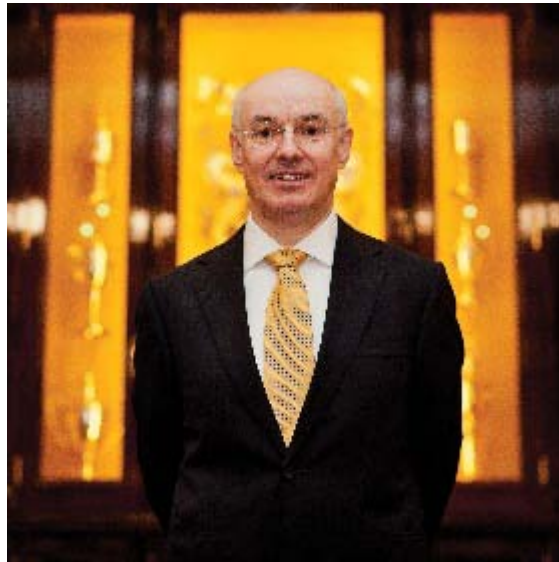


Media Comments 2012

Pensions Insight's 50 most influential people in pensions 2012, 4 January 2012

Dr David Blake

Current role: professor of pension economics, Cass Business School; founder and director, Pensions Institute; chairman, Square Mile Consultants



In 1996, Dr Blake established the Pensions Institute at Cass Business School, which undertakes research on pension-related issues, notably longevity and the design of defined contribution schemes. As one of the most respected academics working in pensions, his research has had a direct effect on many schemes.

For Blake, one of the major challenges facing the pensions industry is the need to move away from bespoke longevity models and swaps which offer “no transparency over pricing or structure” and the creation of a liquid, tradable longevity market before current capacity runs out.

“There will come a point where insurance and reinsurance companies can’t take any more longevity risk,” he says, pointing to the over £1trn of UK pension scheme liabilities and calling on the Government to seed the market with longevity bonds.

“Inflation swaps would not have taken off without governments issuing index linked bonds to provide the risk free structure on which the private sector could build. Unless the Government starts issuing longevity bonds, my feeling is the longevity hedging market cannot grow,” he argues.

Blake is co-founder with JPMorgan of the LifeMetrics Indices and co-creator of the Cairns-Blake-Dowd stochastic mortality model. His seminal paper on mortality risk transfers, which led to the world’s first pension buy-out in 2006 and the world’s first pension buy-in and longevity swap in 2007, saw Blake win the prestigious Robert I. Mehr award in 2011.

Blake is a vocal critic of the current design of defined contribution (DC) schemes and an advocate of the greater use of behavioural finance techniques in scheme design. One of his major projects for 2012 is the real-world implementation of design ideas he and the Pensions Institute developed during 2011, looking at optimal investment and decumulation strategies for DC schemes.

“The basic idea we found was that compared to what was optimal, people tended to move out of equities too late and move entirely into bonds too quickly. The optimal strategy would be to start to move out of equities more slowly, so that when you reach your retirement age, you could still be between 20% and 50% in growth type assets,” he says.

On auto-enrolment, Blake adds: “I’m concerned that with the financial crisis, people will opt out. The Government seems to be chickening out on bringing it in. There’s no good time to ask people to save more, but the fact that the Government is putting auto-enrolment back is disappointing for some.”

Dr Blake is also concerned with the security of private sector pension scheme assets and the “risk of governments commandeering private sector pension assets to cover holes in their balance sheets”, pointing to the examples of Ireland, Hungary, Portugal and the Government’s own plan to get pension schemes to invest in infrastructure projects.

“I’m not saying it’s a bad idea,” he comments, “but directing private sector pension assets into the Government’s own pet projects could be the slippery slope.”

PENSION PREDICTIONS 2012, *Pensions World*, January 2012

Longevity goes global

David Blake, *director, Pensions Institute, Cass Business School*

The first international longevity risk transfers took place in 2011 when Goldman Sachs subsidiaries Rothesay Life and Paternoster reinsured over £500m of longevity risk with the US based Prudential Retirement.

At the end of 2010, the first buyin deal outside the UK took place between the Dutch food manufacturer Hero and the Dutch insurer Aegon. So the longevity market which began in the UK in 2006 has now gone global. Many more international deals can be expected in 2012.

Back home, total transfers in the form of buyins, buyouts and longevity swaps exceeded £9bn in 2011, with longevity swaps taking a bigger share than ever before at around one third of the total. 2012 is expected to see even more deals completed, mainly in the form of buyins and longevity swaps.

DC Focus: The benefits of age, *Pensions World*, January 2012

David Blake and Douglas Wright, Pensions Institute, Cass Business School, on optimal investing

In a nutshell

- optimal contributions begin low and rise with age
- the optimal investment strategy during the accumulation phase is “stochastic lifestyling” (which takes into account human capital as well as financial wealth)
- the optimal investment strategy during decumulation is “phased annuitisation”.

The purpose of any pension plan is to allow spending power to be redistributed from the plan member’s working life to retirement in a manner that is consistent with the member’s personal preferences and in a way that guarantees that this spending power lasts for however long the plan member lives.

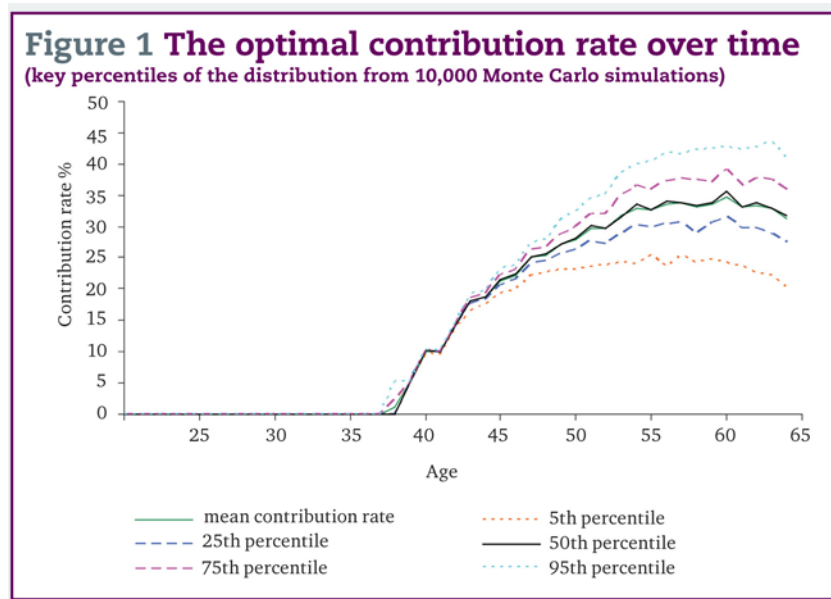
If people are behaving optimally when they design their defined contribution (DC) pension plans (ie, they behave as if they are rational life cycle financial planners), they would take into account the following factors relating to their own circumstances:

- the profile of their salary over their career
- (in particular, the age of peak salary)
- their attitude to risk
- their preference for current versus future consumption.

These factors have implications for the optimal funding and investment strategies that members would need to follow if they want to get the best from their pension plan, according to a new model of optimal life cycle financial planning behaviour examined in a recent Pensions Institute study *Age-dependent investing: optimal funding and investment strategies in defined contribution pension plans when members are rational life cycle financial planners* by David Blake, Douglas Wright and Yumeng Zhang www.pensions-institute.org/workingpapers/wp1111.pdf

Funding strategy

The study found that, in respect of funding the pension plan, the optimal funding strategy is not constant over time, but instead involves an age dependent annual contribution rate. Surprisingly, it is not optimal for individuals to start contributing to a pension plan until several years into their career. This is because individuals’ incomes are initially low and they are better off consuming their incomes rather than saving from them: further, they anticipate receiving higher future incomes from which they can save more comfortably for their retirement. For a male worker with a typical career salary profile, the optimal contribution rate increases steadily from zero prior to age 35 to around 30–35% after age 55 (see [Figure 1](#)).



Members with low risk aversion are willing to take on more risk in the expectation of achieving higher investment returns from pursuing a more aggressive investment strategy during the accumulation phase. This leads them in turn to reduce the level of contributions into their pension plan and hence consume more today. However, as would be expected, the downside of this is greater uncertainty in both the pension fund at retirement and the level of retirement consumption supported by this fund.

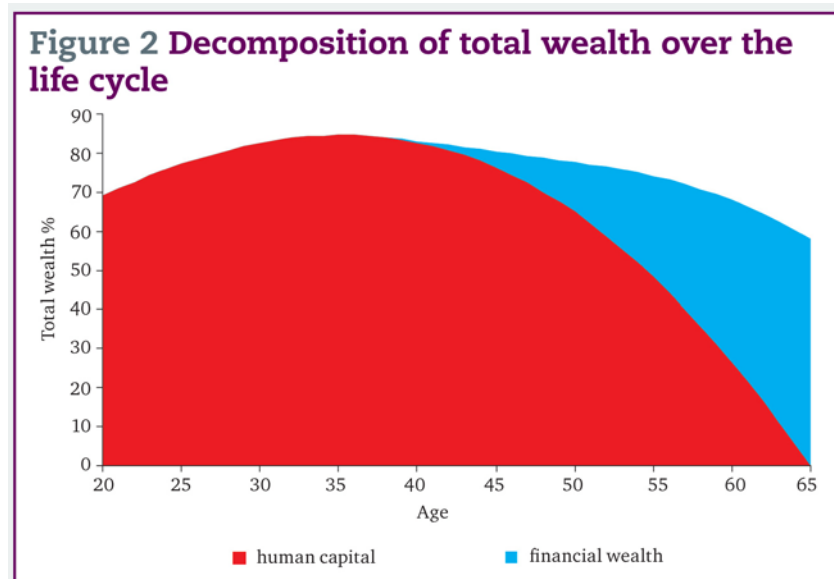
A high personal discount rate implies a preference for current over future consumption (since the value of future consumption is discounted more heavily and hence is less valued the higher the personal discount rate). Members with a high personal discount rate prefer to make low contributions into the pension plan until around ten years before retirement when current consumption has to be reduced sharply each year to make the necessary contributions to ensure even a minimal level of retirement income.

Investment strategy

The study found that the optimal investment strategy is also age dependent. Pre-retirement, the optimal strategy is “stochastic lifestyling” rather than the more conventional “deterministic lifestyling” (the latter involves a mechanical switch from equities to bonds over a pre-set period, typically five or ten years, prior to retirement). It is optimal to begin with to invest 100% of the contributions into the pension fund in equities (or a diversified growth fund including equities and alternatives such as infrastructure, hedge funds and commodities).

As the retirement date approaches, the weight in equities (and alternatives) is reduced and the pension fund is switched increasingly into bonds. So far, this looks similar to deterministic lifestyling. However, the switch into bonds does not happen in a predetermined manner as in the case of deterministic lifestyling. Rather, the optimal equity weighting over the life cycle depends on what happens to equity returns and labour income during the accumulation stage of the pension plan.

Stochastic lifestyling is justified by recognising the importance of “human capital” (which is defined as the present value of lifetime labour income) and treating it as a bond like asset (since it generates a fairly predictable (labour) income stream similar to a bond) which depreciates over the working life of the plan member. The initial high weighting in equities in the pension fund is intended to counterbalance the high initial weight of human capital in the combined “portfolio” of human capital and financial wealth. A young person will typically be human capital rich and financial asset poor. As the share of the pension fund in the combined portfolio rises stochastically, the weighting in equities falls stochastically, while that in bonds rises to counterbalance to stochastic decay of human capital over time (see [Figure 2](#)).



Another difference with deterministic lifestyling is that the portfolio is not completely switched into bonds by the retirement date. Depending on the member’s risk aversion, there could still be significant equity holdings in the pension fund on the retirement date. For reasonable ranges of risk aversion, the optimal equity weighting at retirement varies between 20% and 50%.

The optimal investment strategy at retirement is “phased annuitisation”. The first stage of this strategy is to sell the bonds in the pension fund at retirement and buy a life annuity, thereby securing lifelong income protection for the member as well as benefiting from the “mortality premium” in the return on the annuity. The optimal weight in equities does not immediately change. However, each year that the member survives, the return from buying additional annuities increases (as a result of the mortality premium increasing exponentially with age) and some of the equities are sold to buy more annuities. There comes a point when the mortality premium exceeds the equity risk premium. At this point, when the member is around age 75, the entire residual pension fund is switched to annuities whatever the member’s attitude to risk (assuming no bequest motive).

The effects of lower risk aversion and a higher personal discount rate are to increase the length of time over which the pension fund is fully invested in equities and to reduce the length of the switchover period into bonds prior to retirement.



Author: [David Blake](#)

Professor David Blake is director of the Pensions Institute, Cass Business School.



Author: [Douglas Wright](#)

Douglas Wright is senior lecturer in the Faculty of Actuarial Science and Insurance