

# Retirement for ordinary people

Retirement systems around the developed world are facing the problems of not being able to pay out what was promised, or falling short of giving what people need for a reasonable standard of living in their old age. SMU president Arnoud De Meyer and MIT Sloan School of Management finance professor and Nobel laureate Robert Merton discuss how to tackle that. **CAI HAOXIANG** reports

**T**HE problem is simply stated. One of the biggest challenges that the government is facing is how to provide for a shrinking and ageing population that is living longer. Issues span the socio-economic and political spheres. Singapore is grappling with the problem of a highly competitive, stressful, unequal society focused on economic growth, while balancing people's demand for a slower pace of life and a more egalitarian approach to those who have fallen behind in the race. Amid all this, more people are getting old and staying alive longer. Life expectancies in Singapore are among the highest in the world with a newborn male expected to live to 80 and a female, 85.

The number of citizens aged 65 and above are expected to triple to 900,000 by 2030. By then, just two working-age citizens will support one elderly, down from around six now. A low fertility rate and later marriage age, partially caused by life in an urbanised, developed city, compounds the problem. The need to have a sustainable system to ensure the economy keeps humming so that Singapore's elderly can be taken care of thus preoccupies policymakers. Taxes might have to go up.

Politically, Singaporeans are increasingly resistant to government policy that brings in foreigners to bolster economic growth in an increasingly overcrowded island that experienced infrastructural strains and dramatic property price increases in the last few years. Early last year, the government bit the bullet with a controversially timed Population White Paper that laid out these problems and suggested that Singapore's population, then at 5.3 million, could rise to 6.5 to 6.9 million by 2030. It was later made clear in Parliament that the 6.9 million figure was not a target but a planning parameter.

Resources have been pumped into raising productivity, but progress is slow. If people need to work longer, they need to be employable and have the necessary skills. A mandatory re-employment system is in place to help people keep their jobs from the current retirement age of 62 till age 65 and the next steps will be to raise that to 67. Retirement communities and more healthcare and eldercare services are in the works.

In terms of retirement financing, one of the biggest reforms made in recent years is to the nation's pension fund system, the Central Provident Fund (CPF). A lifelong annuity scheme put in place called CPF Life is meant to tackle the problem of people outliving their retirement savings, by ensuring they have enough money to meet basic needs for as long as they live (see story below). For health care, a universal health insurance scheme for life called MediShield Life is being discussed, which will cover large hospital bills.

## Problems with Singapore's system

But the tendency for Singaporeans to want to upgrade their homes might prevent them from meeting their retirement needs. A November 2012 study commissioned by the Manpower Ministry concluded that most young Singaporeans were able to fund their retirement. But it rested on several key assumptions, including the buying of a Housing Board build-to-order (BTO) flat, with the size depending on which income percentile they are in, and not upgrading.

Singaporeans upgrade their homes for a variety of reasons, such as moving to a resale flat that is closer to their parents, getting a larger space for their children to grow up in, or buying private property because it is seen as prestigious to do so. Resale properties can easily cost more than \$100,000 compared to their BTO counterparts. The average 1,000 square foot suburban condominium currently costs \$1.2 million, double that of an HDB five-room resale flat in a mature estate.

The use of savings for housing needs has

diverted much money away from retirement, said SMU president Arnoud De Meyer at an event last Friday. He pointed to research done by the Sim Kee Boon Institute for Financial Economics showing that most Singaporeans use their money for housing, leaving the remainder with the CPF, and in bank accounts paying low returns.

He cited high fees and inertia for the fact that few Singaporeans invest outside of the CPF and suggested that alternative products such as bonds and low-cost life-cycle funds could be useful to deal with the inertia. He also calls for "restraint" on the use of CPF for property purchases. "If so, what should be the ceiling so that Singaporeans can own their own home and still have sufficient savings for retirement?"

The risk of Singaporeans outliving their savings remains a challenge. Although CPF Life has addressed that by providing an income stream for life, longevity risk is not completely hedged against rising prices. Prof De Meyer pointed out. "The current scheme is not inflation-protected and the payouts are contingent on prevailing interest rates. Research should be carried out on the feasibility of modifying the scheme to provide inflation protection as well as guaranteeing a minimum payout to ensure that retirees have sufficient financial resources for subsistence living."

## Jane Austen definition of retirement

MIT Sloan School of Management finance professor Robert Merton then laid out his thoughts on what a feasible retirement system could be. He developed one such system at Dimensional Fund Advisors, where he is resident scientist at. He won the Nobel Prize in Economics in 1997 for a new method to determine the value of derivatives and has spoken in Singapore before on retirement financing.

There are two types of pension systems: defined-benefit and defined-contribution. In defined-benefit plans, employers bear invest-

**'By the time you retire, you've gotten used to how you want to live. The goal is sufficient funding to sustain the standard of living you've enjoyed in the latter part of your work life.'**

— Prof Merton

ment risks and promise to pay a certain monthly amount upon employees' retirement. In defined-contribution plans, employees and employers contribute a known amount but the employee receives an unknown amount upon retirement depending on return rates.

Defined-benefit plans worldwide are facing problems due to over-optimistic return assumptions and employees living longer than anticipated. By contrast, defined-contribution plans such as Singapore's CPF are seen as more sustainable, because employees take out what they put in.

But defined-contribution plans have their problems too, Prof Merton said. One design flaw is that they target to accumulate a lump sum of money.

This is not what people think about when they retire, Prof Merton argued. People aim for a fixed, inflation-protected stream of income every month based on their most recent standard of living, he said.

A good retirement is defined by not wanting to live worse. "By the time you retire, you've gotten used to how you want to live. The goal is sufficient funding to sustain the

standard of living you've enjoyed in the latter part of your work life. Jane Austen didn't say Mr Darcy was worth £10,000, but £10,000 a year," he quipped, referring to a main character in the novel *Pride and Prejudice*.

In tackling the retirement problem, defining the goal is critical or a good solution cannot be found, he said. Goal-based investing is going to be more common in the future, he said. Saying that one wants to beat the Consumer Price Index (an inflation measure) by three percentage points is not a goal, he noted. "It is more of a wish. The world gives you what it gives you. You can't dictate that."

## Design principles

A retirement system that can be practically implemented for large numbers of people should have a number of key design principles, said Prof Merton, who started out his academic career with a Bachelor's degree in engineering mathematics.

- It targets an inflation-protected income at retirement, instead of wealth accumulation – in an echo of the defined-benefit systems of old. Unlike that system, employees in Prof Merton's system have to contribute a monthly amount. Success is measured by the probability of meeting an income goal, instead of reaching a certain retirement account size.

- Risk is thought about in terms of shortfall risk, the risk of income falling below a goal, instead of traditional volatility measures.

- The proposed design must work well for people who do not get involved in the plan, who do not answer questions, give no information, and make no decisions.

Studies show that no matter how smart or well-educated people are, ordinary people tend not to get involved in personal finance, he said. "As an engineer, if you design a system to work well to an extreme, it's a robust system. If someone has a solution that says people have to get up every day and check on a computer where they are and fill in forms, that's not a solution. It's like saying we'll solve obesity in the US by having everybody do calisthenics for two hours every day. That's not going to happen."

- Retirement goals must be customisable for every individual.

Averages cannot be used in retirement planning as everyone has different needs. "Suppose some people wear size 6 shoes, some people wear size 12 shoes. How do you think it'd work if you just had size 9 shoes," he said.

- The system has to be integrated with other financial assets the individual has. Future contributions from the individual should be included.

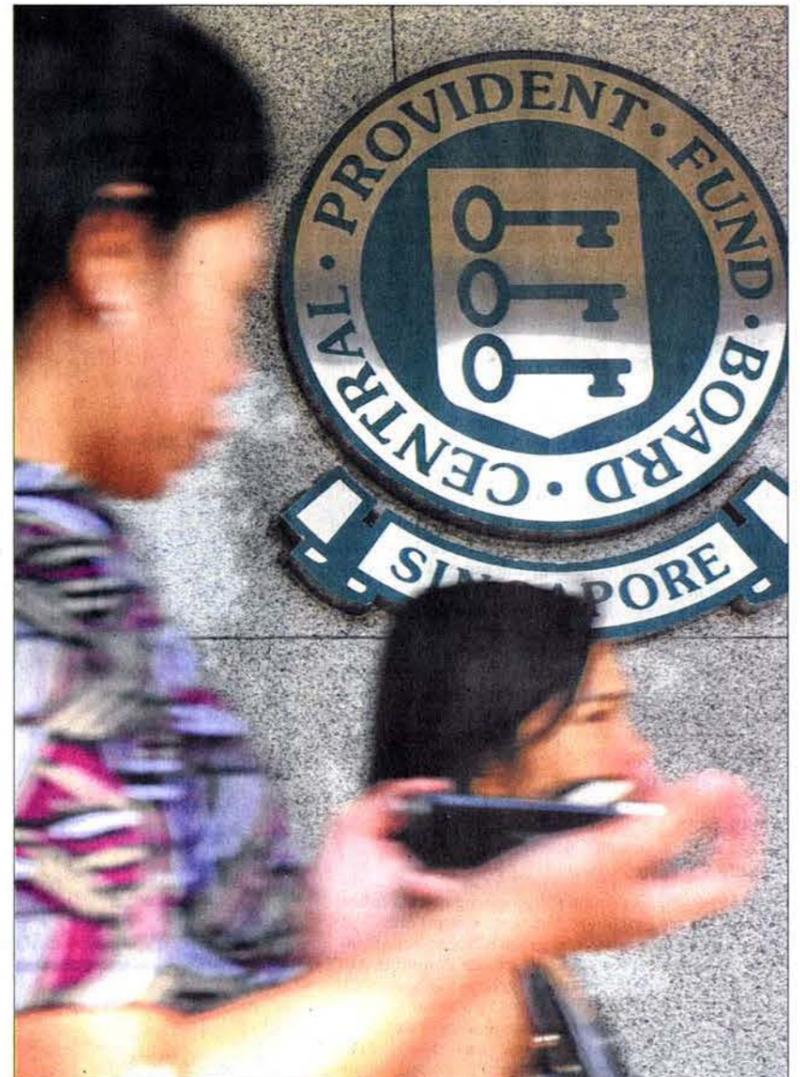
Retirement income goals are treated as liabilities, which assets, including projected contributions, expected CPF benefits, and current account balances, are taken into consideration when thinking about how to match those liabilities. "Some models treat future contributions as an exogenous factor. That's not okay for understanding risk," he said.

- It should provide a seamless transition from the accumulation phase to the draw-down phase.

- Relevant, meaningful information and choices have to be offered to individuals to help them meet their income goals.

Three choices relevant to people's lives are whether they want to save more, work longer, or take more risk with their money, he said. Conventional retirement or investment funds do not offer choices that make sense to ordinary people, and which people are ill-equipped to decide on, he said.

"When I look at most advice given to individuals, risk-return frontiers, questionnaires, are you aggressive or conservative... I think my answer to that depends on what day of week you ask me and whether markets had a good day."



Saving for the future: Ensuring the economy keeps humming so that Singapore's elderly can be taken care of is a constant preoccupation of policymakers. FILE PHOTO

## Merton's system

Prof Merton's portfolio management system thus aims to be relevant to people in terms of the choices they can make in saving more, working longer, or taking more risk. It has two targets: a "conservative" income goal that retirement monies invested aim to hit with a 96 per cent probability, and a "desired" income goal upon which, if met, no further risk will be taken.

Money in Dimensional's "Managed DC" system that Prof Merton developed is allocated across various assets, according to a 2012 article on Dimensional's website by retirement professor Wade Pfau. There are three underlying funds: a stock portfolio with world exposure, and medium-term as well as long-term inflation-linked fixed income funds. Asset allocation adjusts monthly depending on individual income goals. Costs fall in the range of 30 basis points (0.3 per cent) for the advisory fee and 40 basis points for underlying mutual fund expenses, Prof Pfau said.

The first part of the portfolio goes towards meeting the minimal retirement income goal with 96 per cent probability – the "conservative" income number. The rest of the portfolio will aim to increase the chances of meeting the "desired" income goal.

In a sample slide that Prof Merton showed on Dimensional's retirement system, people shift sliders on a screen, enabling them to recognise the trade-offs between various key inputs relevant to their lives. The four parameters are: desired income target, conservative income target, pay contributions, and retire-

ment age. Moving these parameters will move a dial pointing at the probability of them meeting their desired income target.

Increase the minimum conservative income target, and a more defensive strategy is used that will cause the desired income level to come down. To get a higher desired retirement income, people will either have to work longer, thus delaying their retirement age, or contribute more from their salary. Otherwise, they will have to take more risk in their portfolio, meaning the probability of achieving their desired income would come down.

"When you push the button, it's real, it's an order, your next pay cheque is going to be smaller," he said. "This tool allows families to sit down and talk intelligently about what really matters to them rather than risk-return frontiers."

"Are you willing to lower financial goals to retire early and go bird-watching, can we give up going out to dinner once a week, save a little more, can we take a little more risk? Instead of asking what return do you want... so much of this industry that I've been in is built on that," Prof Merton said. "They're not dealing with real people, real decisions. The time, technology to do this is there, the need is there."

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