

The CPF and the Singapore Annuities Market

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Preamble

- Singapore's population is aging fast
- A rich nation + high savings rate, but...
- CPF Annual Report 2000:
 - 203,921 members aged 50+
 - 67% have balance < S\$150,000

Table 1 Proportion of Population 65+

Country	%		% Change 1998-2025
	1998	2025	
China	6.6	13.3	102
Indonesia	4	8.6	115
Japan	16	26.8	75
Korea	6.4	16.5	158
Malaysia	3.9	7.8	100
Singapore	6.8	20	194
Taiwan	8.2	17.9	118
Thailand	6	14.1	135

Source: McCarthy et. al. (2001)

Where have the CPF savings gone?

- Housing.
- “Asset-rich, cash poor” syndrome
- Government beginning to tackle problem.

1995: Minimum Sum Scheme.

2001: Special Retirement Scheme.

2002: Cap on CPF usable for housing.

Outline

- Evolution of the CPF pension system
- Impact on distribution of retirement wealth
- Impact on annuities market
- Policy implications for the design/implementation of pension plans

The CPF System

- Started in 1955 as a defined-contribution pension plan.
- Evolved into multi-purpose institution.
- CPF funds can be used for:
 - a. Home financing
 - b. Tertiary education
 - c. Investments
 - d. Insurance
 - e. Medical

CPF Contribution Rates

- Employee: 20%
- Employer: 16%
- Income ceiling of \$6,000
- Bonuses: CPF is levied on up to 40% of regular income (no income ceiling)

CPF Accounts

- Ordinary Account
 - Home financing
 - Education
 - Approved investments
 - Insurance
- Medisave Account
- Special Account

Table 2 CPF Approved Investments

CPFIS-OA	CPFIS-SA
<i>Full Ordinary Account savings can be invested in:</i>	<i>Full Special Account savings can be invested in:</i>
Fixed Deposits	Fixed Deposits
Singapore Government Bonds	Singapore Government Bonds
Statutory Board Bonds	Statutory Board Bonds
Bonds Guaranteed by Singapore Government	Bonds Guaranteed by Singapore Government
Annuities	Annuities
Endowment Insurance Policies	Endowment Insurance Policies
Investment-linked Insurance Products	Selected Investment-Linked Insurance Products*
Unit Trusts	Selected Unit Trusts*
Exchange Traded Funds	Selected Exchange Traded Funds
Fund Management Accounts	
Up to 35% of investible savings can be invested in:	
Shares, including REITs	
Corporate Bonds	
Up to 10% of investible savings can be invested in:	
Gold	

Table 3 CPF Contribution Rates

Employee Age (years)	Contribution By Employer (% of wage)	Contribution By Employee (% of wage)	Total Contribution (% of wage)	Credited Into		
				OA %	SA %	MA %
35 & below	16	20	36	26	4	6
Above 35 - 45	16	20	36	23	6	7
Above 45 - 55	16	20	36	22	6	8
Above 55 - 60	6	12.5	18.5	10.5	0	8
Above 60 - 65	3.5	7.5	11	2.5	0	8.5
Above 65	3.5	5	8.5	0	0	8.5

Investment Choices

- Restrictive compared to other DC plans.
- CPF Board interest rates very low
- OA: 2.5% nominal (real yield close to zero historically)
- MA and SA: 4%
- Most CPF members withdraw savings to buy property

Residential Properties Scheme

- Started in 1968 to support public housing program.
- Housing and Development Board (HDB).
- HDB flats now houses 88% of population.
- 11% resides in private housing.

Housing Incentives

- Low mortgage rates for 2 categories of HDB flat buyers.
- Housing Grant Scheme for buyers of resale HDB flats in the open market.
- Grant of \$30,000

Repayment Consequences

- Resale levy payable on sale of flat.
- Applicable to buyer of a new flat or resale flat under Housing Grant Scheme.
- Levy depends on flat size.
- Makes downgrading a costly proposition for the elderly.

Table 4 Resale Levy on Sale of Flats

Flat-type	Revised Graded Resale Levy (Based on Declared Resale Price, or 90% of Market Valuation, whichever is higher.)
2-room	15%
3-room	20%
4-room	22.5%
5-room & Executive	25%

Overall implications of housing incentives

- Induces substantial investment in housing.
- > 20% of population shifting houses in any given year.
- Twice as many upgrade than downgrade.
- Housing turnover highest among 30-49.

CPF Savings in Old Age

- At 55, member can withdraw up to 50% of CPF balance above a Minimum Sum.
- MS ensure retirees have a basic stream of income without selling his home.
- Couples set aside 1.5 times the MS if they nominate each other as beneficiaries.

The Minimum Sum Scheme

- MS can only be withdrawn at 62.
- Investment options.
 - a. Keep with CPF Board
 - b. Deposited in approved bank
 - c. Buy single premium deferred annuities

CPF Annuities Payout

- Under options (a) and (B), CPF annuitizes accumulated MS from age 62.
- Payout ends when MS balance is exhausted.

Table 5 Private Annuity Payout Rates

CPF MINIMUM SUM SCHEME TABLE OF MONTHLY PAYMENT RATES FOR THE MINIMUM SUM OF \$75,000 PLACED WITH A PARTICIPATING INSURANCE COMPANY, PARTICIPATING BANK OR CPF BOARD (Applicable only for the period 1/8/2002 to 30/6/2003)								
Features	Options	Minimum sum used to purchase annuity at age 55						Period of Payment
		Types of Annuity Rates	Insurance Company	Annuity rate at entry age of 55		Benefits		
				Male (\$/per month)	Female (\$/per month)	Guaranteed Period/Guaranteed Amount on Death	Other Benefits	
Monthly payment starts from age 62	Insurance Company	<u>Flat Annuity Rates</u>	<u>AIA</u>	543.75	510.75	Return of the single premium less total annuity payments made.	Special non guaranteed dividend	1. Annuity income is payable until death. 2. All annuity plans provide a guaranteed return of capital on death or termination before age 62.
			<u>Asia Life</u>	579.98	534.30	\$105,533 less total annuity payments made.	-	
			<u>GE Life</u>	575.00	534.00	Return of the capital sum plus interest accumulated at 2.0% pa to retirement age less total annuity payments made.	-	
				517.00	486.00	Return of the capital sum plus interest accumulated at 1.25% pa to retirement age less total standard annuity payments made.	Long Term Care Benefit	
			<u>*Aviva Ltd</u>	546.00	496.00	Return of the premium plus all accrued interest compounded at 2% pa up to the commencement date of annuity payment less total annuity payments made.	-	
			<u>Keppel</u>	576.00	535.00	15 years	One health screen each policy year by Keppel Insurance approved doctors	
			<u>OAC</u>	575.00	534.00	Return of the capital sum with interest compounded at 2.0% less total annuity payments made	-	
			<u>UOB Life</u>	653.00	578.00	Return of the purchase price less total annuity payments made.	-	
				617.00	566.00	15 years	-	

Adequacy of MS

- Mean salary of a 55-year old in 2002: \$3,817
- % last income on retirement: 67%
- Inflation between 55-62: 2% p.a.
- CPF annuity payout of \$610 from 62
- Will fund 21% of retirement needs
- Will run out in 13 years

**Table 6 Probability of Survival to Selected Ages:
Men and Women at Age 65 in 2000**

	<u>Men</u>	<u>Women</u>
Remaining Life Expectancy (years):	16.4	19.6
Probability of Surviving to Age:		
70	88%	92%
75	74	82
80	56	69
85	36	51
90	18	31
95	6	14
100	1	4

Source: Brown (2000)

Market for Private Annuities

- Annuities help to insure against outliving one's resources.
- In most countries, annuity markets are thin.
- Penetration rate in U.S. is about 2%.
- Low demand partly due to pricing.
- Measure of value: money's worth e.g. Mitchell et. al. (1999)

The Mitchell et. al. Study

- 20% of wealth given up in exchange for longevity insurance.
- Adverse selection accounts for half of the cost of longevity insurance.

Table 7 Summary of Mitchell et. al. Study

	General Pop	Annuitant Pop	Cost of AS
Men	0.814	0.927	0.113
Women	0.852	0.927	0.075

Annuity Pricing in Singapore

- 15% of Singapore retirees annuitize a portion of their retirement income.
- Recent study finds that the money's worth of annuities in Singapore is high.
- Adverse selection accounts for very small fraction of cost of longevity insurance

Data

- 9 CPF-approved insurers.
- Payouts and other annuity features.
- Discount rates: 5% statutory rate and 10-year government bond yield.
- Cohort tables for 55-yr olds from annuitant and general population.

Survey findings (6 insurers)

- 93% of all in-force annuity contracts are deferred annuities.
- 87% purchased using CPF Minimum Sum.
- 92% of all annuitants acquire plans between 55 and 62.

Table 8 Money's Worth of Annuity (Annuitants)

Insurer	4.6% (Govt Bond Yield)		5% (Statutory Rate)	
	Male	Female	Male	Female
AIA	0.846	0.876	0.792	0.816
Asia Life	1.010	1.045	0.946	0.974
GE Life	1.021	1.056	0.956	0.984
ICS	1.002	0.999	0.941	0.931
Keppel Life	0.996	0.993	0.932	0.925
OAC	1.036	1.061	0.970	0.989
Prudential	0.992	0.974	0.929	0.907
UOB Life	1.047	1.056	0.980	0.984
NTUC Income	1.019	1.066	0.949	0.988
Mean	0.997	1.014	0.933	0.944
Median	1.010	1.045	0.946	0.974
Coefficient of Variation	0.060	0.061	0.059	0.061

Table 9 Money's Worth of Annuity (Population)

Insurer	4.6% (Govt Bond Yield)		5% (Statutory Rate)	
	Male	Female	Male	Female
AIA	0.835	0.872	0.783	0.812
Asia Life	0.999	1.040	0.936	0.970
GE Life	1.009	1.051	0.945	0.979
ICS	1.003	0.993	0.935	0.926
Keppel Life	0.985	0.988	0.922	0.921
OAC	1.023	1.056	0.959	0.985
Prudential	0.984	0.968	0.922	0.902
UOB Life	1.034	1.051	0.969	0.979
NTUC Income	1.004	1.060	0.936	0.983
Mean	0.986	1.009	0.923	0.940
Median	1.003	1.040	0.936	0.970
Coefficient of Variation	0.060	0.061	0.059	0.061

Table 10 Cost of Adverse Selection

Insurer	4.6% (Govt Bond Yield)		5% (Statutory Rate)	
	Male	Female	Male	Female
AIA	0.0110	0.0040	0.0088	0.0036
Asia Life	0.0110	0.0050	0.0094	0.0042
GE Life	0.0120	0.0051	0.0106	0.0044
ICS	0.0090	0.0061	0.0059	0.0053
Keppel Life	0.0120	0.0050	0.0103	0.0040
OAC	0.0130	0.0050	0.0107	0.0043
Prudential	0.0089	0.0059	0.0071	0.0052
UOB Life	0.0130	0.0051	0.0109	0.0044
NTUC Income	0.0150	0.0060	0.0130	0.0050
Mean	0.011	0.005	0.010	0.005
Median	0.012	0.005	0.010	0.004

Why are Singapore annuities priced attractively?

- Demographics
 - Low fertility rates
 - Long life expectancy
- Institutional features of Singapore pension system:
 - Limited social security
 - Lock-up of CPF funds in housing
 - Minimum Sum Scheme
- Pool of “involuntary” annuity buyers

Policy Implications

Positive aspects of the CPF system:

- Individual responsibility
- Does not impose heavy tax burden
- Linked to employment

Weaknesses

- Limited choices of asset mix
- Low real returns on CPF savings
- Overinvestment in property


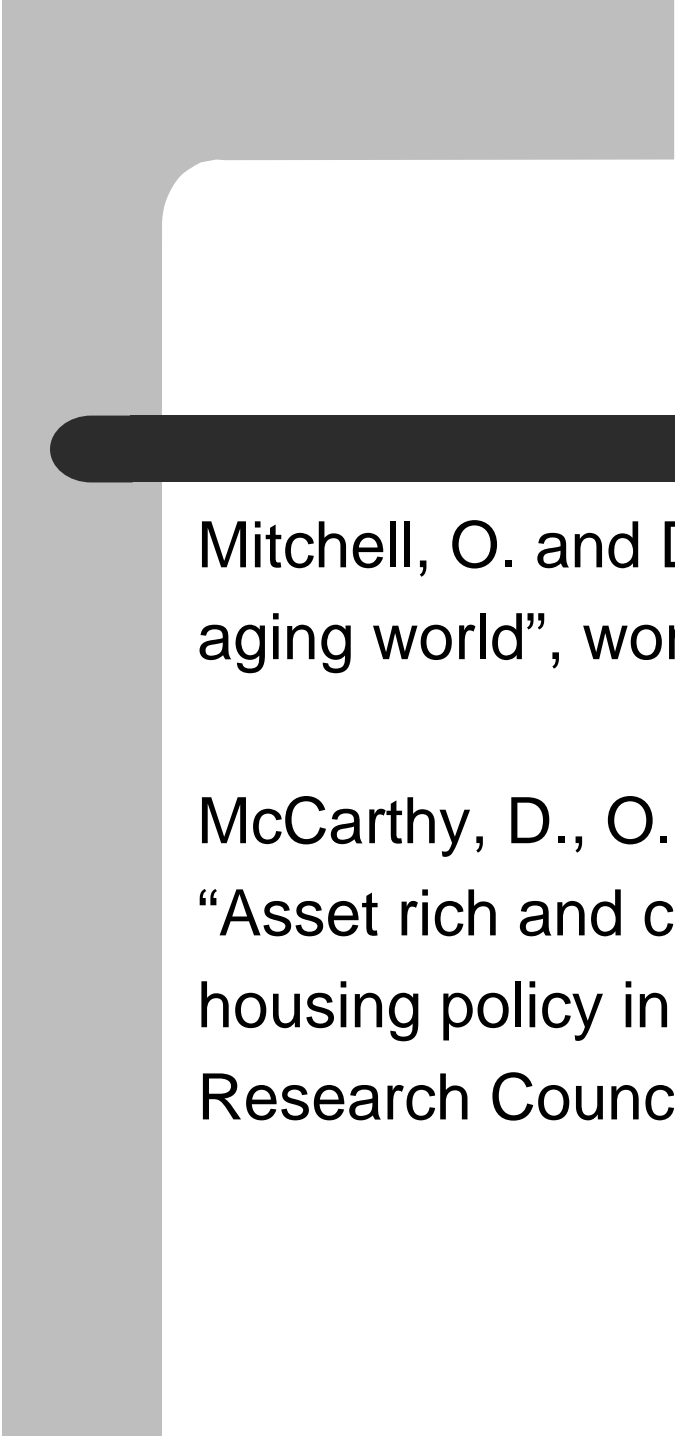
Strengthening the system

- Caps on use of CPF for housing
- Public education
- Higher minimum sum
- More generous tax incentives for voluntary retirement plans
- Packaging annuities with medical/nursing home insurance

References

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