UNSW AUSTRALIA

Business School

26th Colloquium on Pensions and Retirement

Never Stand Still | Business School | Risk and Actuarial Studies

Indexed Annuity Bonds: A market failure to create the ideal pension investment?

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Summary

There can be too much liquidity

Super funds have long term liabilities and short term assets

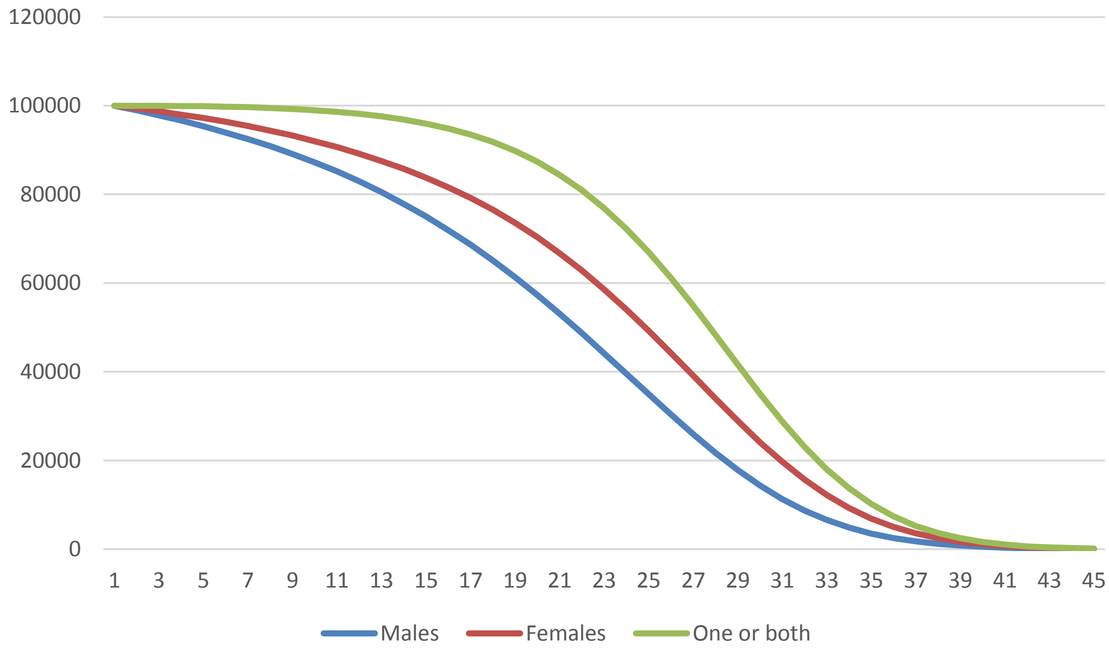
Banks have short term liabilities and long term assets

… but there are those who benefit

Match assets & liabilities and bypass liquidity feeders?

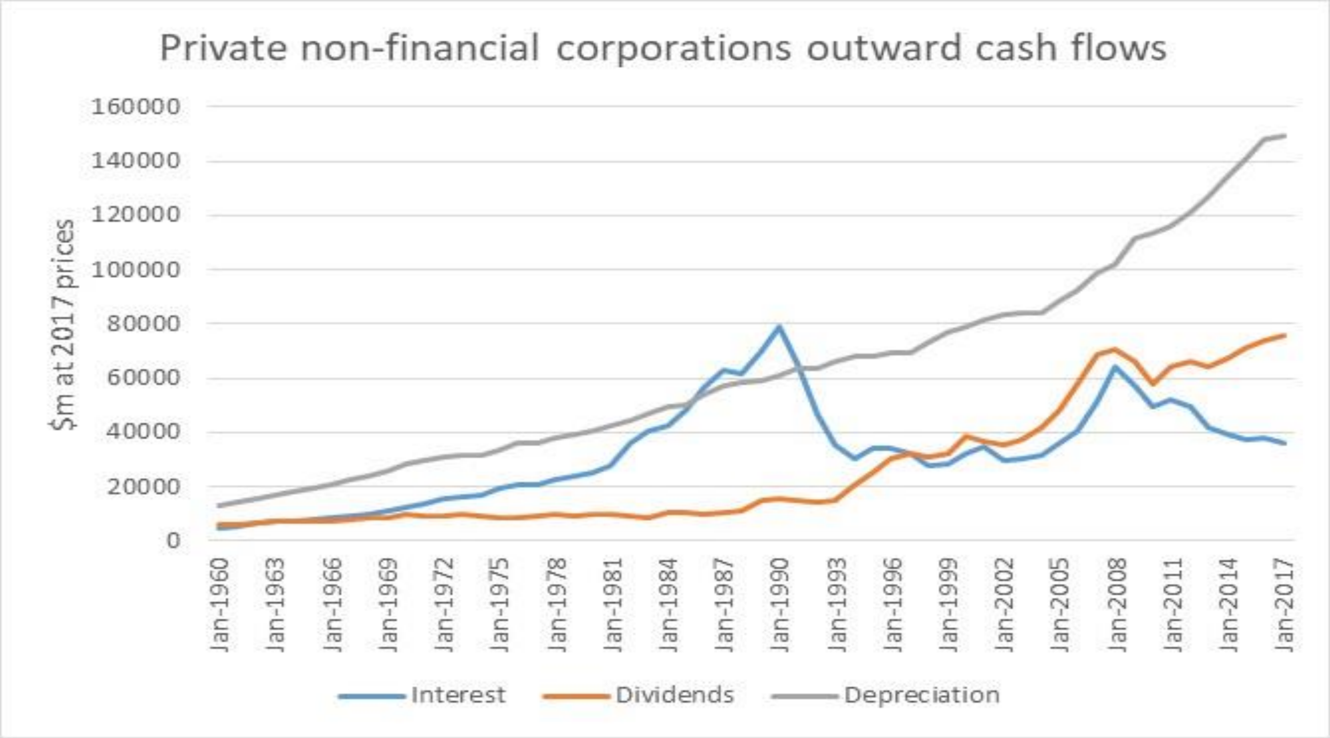
Image taken from http://www.dailymail.co.uk/news/ticle-2170056/Met-Office-warns-lives-risk-issues-highest-level-alert-3ins-rain-fall-overnight-horrendous-downpours.html

The required cash flows



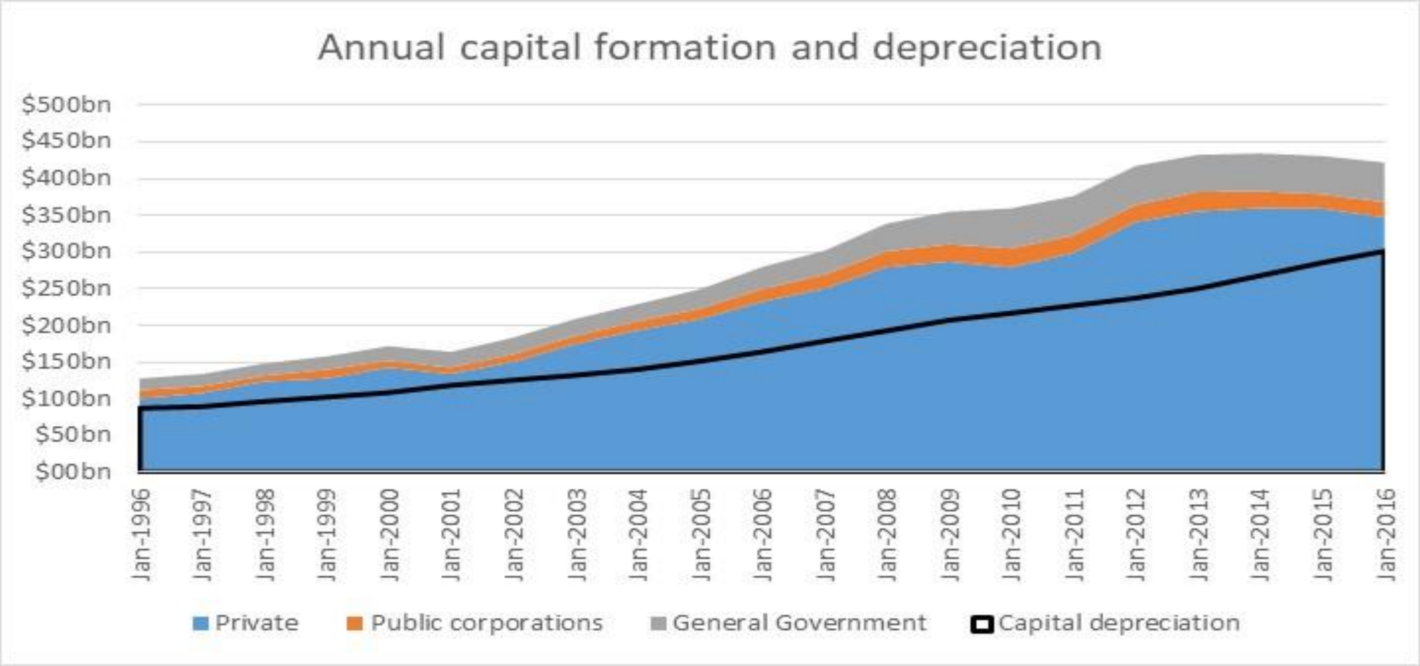
Cash flow required by 100,000 65 year old annuitants – Australian Life Tables 2010/12 using 125 year projection factors

Dividends, interest and depreciation



Interest is utterly unsuitable to fund retirement,
dividends are better, depreciation a great match

Depreciation cash flows



- The gap of ~$150bn needs to be funded by net new savings
- Superannuation contributions and investment income are each ~$100bn

What is being depreciated?

Dwelling construction		27%	
Non-dwelling construction		33%	
	Mining		6%
	Manufacturing		3%
	Electricity		5%
	Transport		5%
	Rental property		3%
Machinery and Equipment		28%	
	Mining		3%
	Manufacturing		4%
	Transport		3%
	Rental property		3%
Computer software		5%	
Other		8%	

Rates of depreciation & age of assets

2013	Capital Stock $ bn	Depreciation $ bn	Rate of depreciation p.a.	Average age
Dwellings	1,687	38	2%	21.3
Other Construction	2,023	72	4%	19.8
Machinery	605	69	11%	8.2
Exploration	64	4	6%	14.7
Other	438	60	14%	
Total	4,817	243	5%	

Capital and depreciation

Cash flows from housing

Cash flows from housing	$bn	% of GDP
Gross rent - Imputed rent for owner-occupiers [1]	130	8.5%
Gross rent - Actual rent for housing	38	2.5%
Rates, land tax and insurance	14	0.9%
Maintenance	14	0.9%
Consumption of financial services	20	1.3%
Miscellaneous (including commission)	5	0.3%
Consumption of fixed capital	53	3.5%
Interest payable	64	4.2%

Conclusion:

- In Australia, there are enough cash flows from depreciation each year to fund pensions
- The durations are similar:
  - Life expectancy at 65 is similar to the average life of capital investments

IABs: Annuities not bullets

- Annuity rather than bullet repayments match the cash flow needs of investors and of borrowers

- Why are annuity payments not more common?
  - *Accounting is too complicated?*
  - *Banks make money from matching bullet repayments to cash flows?*

IABs: Link to borrowers' inflation rate

- The CPI represents an average: both borrower and pensioners face a basis risk
- Pensioners will lose more than borrowers will gain if repayments are linked to borrowers' revenue inflation. e.g.
  - Energy companies to electricity and gas prices
  - Miners to commodity prices (less volatile than profits)
  - Government borrowing to some tax receipts

IABs: Link to longevity index

- The term of the annuity should be, prudently, shorter than the expected life of the assets
- Adding a contingent increase of a year or two is a trivial risk in the context
- The benefit to pensioners exceeds the cost to borrowers
- Some assets (property and machines) face declining usefulness that may match declining survivors of particular cohorts

Conclusion

Advantages of IABs:

- Match cash flows of investors and borrowers
- Can reduce inflation and longevity risk
- Priced at inception of the project being funded thus enhancing capital allocation efficiency in the economy
- Little need for subsequent dealing so reduce costs of institutional investment

Precious few IABs

Bond	Project	State	Maturty Date	Yield to Maturity	Ranking
Praeco	Defence Headquarters	C'th	15/08/2020	CPI+1.93%	Senior secured
Wyuna Water	NSW Water Filtration Plants	NSW	30/03/2022	CPI+2.05%	Senior secured
JEM CCV	Victorian County Court	VIC	15/06/2022	CPI+1.79%	Senior secured
MPC	Melbourne Convention Centre	VIC	31/12/2025	CPI+1.79%	Senior secured
Plenary Justice (SA)	SA Police and Courts	SA	15/06/2030	CPI+2.24%	Senior secured
JEM NSW Schools	NSW Schools	NSW	28/02/2031	CPI+2.35%	Senior secured
Civic Nexus	Southern Cross Station	VIC	15/09/2032	CPI+2.38%	Senior secured
Novacare	Mater Hospital, Newcastle	NSW	15/04/2033	CPI+2.44%	Senior secured
RWH Finance	Royal Women's Hospital	VIC	30/06/2033	CPI+3.10%	Senior secured
MPC	Melbourne Convention Centre	VIC	31/12/2033	CPI+2.43%	Senior secured
JEM Southbank	Southbank Institute of Technology	QLD	28/06/2035	CPI+2.55%	Senior secured
JEM NSW Schools	NSW Schools	NSW	28/11/2035	CPI+2.49%	Senior secured

Source: FIIG Securities

Please note that bonds marked in red above are available to wholesale investors only.

Stiglitz on TIPS

Treasury turned to bond traders - their natural clientele - for advice. The experience in England from the perspective of bond traders was that these bonds were a failure; that is, people bought them for their retirement and did not trade them. Without trades, where were their commissions? Of course, from the perspective of someone trying to create an instrument to enhance retirement security, this was ideal: we did not want a gambling instrument. The bond traders raised anxiety levels: Would Treasury throw a party to which no one would come?"

Financial sector rent seeking

- The financial sector is universally recognised as seeking rents
- Annuities are not popular with financial advisors because they yield no ongoing fees. (US VA's with guarantees an exception because upfront commissions of 7%)
  - *To what extent does this explain the annuity puzzle?*
- Bottom drawer investments are not popular because they yield less to financial markets
  - *To what extent might this explain the shortage of IABs?*

Persisting conflicts in investment markets

The common law outlaws conflicts of interest – unless specifically contracted out. They are endemic in institutional investment markets.

- Rating agencies paid since the 1970s by the borrowers
- Merchant banks paid by those raising funds
- Stockbrokers giving advice and being paid for dealing
- Trustees using related parties for outsourcing

Beneficiaries of the mismatch

- Investment managers and asset consultants earn more money providing ongoing advice on the asset allocation and price of liquid assets that need to be sold
- Stock exchanges, stockbrokers, custodians to more work and earn more fees
- Commercial banks make money short matching cash flows to liquid instruments
- Financial directors make themselves more valuable by managing difficult treasury cash flows

Conclusion

Almost all the experts are conflicted

Trustees need to take control:

- Bring investment management in-house and eliminate conflict of interests
  - Disintermediate expensive merchant banks by interacting directly with borrowers
  - Fund investment research directly
- Develop a market in IABs
- Offer them to members to fund their retirement

Discussion